

A CATALOGUE AND HISTORICAL ACCOUNT OF THE SLOANE SHELL COLLECTION

GUY L. WILKINS



Hans Sloane

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LONDON: 1953

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By GUY L. WILKINS

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SYNOPSIS

The surviving Sloane shells, recorded and described in detail in this paper, formed part of the nucleus of the shell collection in the British Museum at its inception in 1753. Many specimens date from the mid-Seventeenth Century and have personal associations with William Courten, Martin Lister, James Petiver, William Dampier, and numerous other contemporary author-naturalists and travellers.

An attempt has been made to trace the history of the Sloane shell collection from the time of Courten and Lister to the present day—a period of nearly two hundred and seventy years. Many Sloane specimens were figured by Lister from 1685 to 1692, and a selection of these, together with the actual specimens and original Lister drawings, are reproduced in the accompanying plates.

I. HISTORICAL ACCOUNT OF THE SLOANE SHELL COLLECTION

It was assumed for many years that the recent shells forming part of the great collections of Sir Hans Sloane (1660-1753) were no longer recognizable, if indeed, they existed at all, and it is therefore satisfactory to be able to record that over four hundred of his original specimens were discovered during 1950-51 among the older portions of the shell collections in the Department of Zoology. These specimens formed part of the collection acquired by the Nation after the death of Sir Hans Sloane in 1753, and thus became the nucleus of the present collection of mollusca.

The life of this great collector has been dealt with in several publications, and therefore only biographical and historical notes having a direct bearing on his collection of shells are mentioned here. Sloane compiled a number of manuscript catalogues recording his acquisitions, three volumes being devoted to the "Testacea" or shells, and the specimens now segregated bear his manuscript numbers corresponding to those in the surprisingly comprehensive catalogues. The numbers, written in ink either on small labels attached to the shells, or on the shells themselves, are in some instances quite clear, but in others faint and difficult to decipher correctly. Some of the numbered specimens have been recovered from those formerly on exhibition; the remainder were found among the study material. In the years 1799 and 1837, when particularly fine shells became available for exhibition, it is probable that many dull-looking Sloane specimens were replaced in the exhibition cases with fresh ones. Heavy cleaning in the past has undoubtedly been responsible for the loss of catalogue numbers, and for this reason alone it is certain that a number of Sloane shells still exist unrecognized in the general collection.

The calligraphy of the numbers on the shells corresponds exactly with that in the catalogues, and it is clear that the specimens were numbered as the entries were made, and by the same hand, satisfactorily proved to be that of Sloane himself. His writing was always poor, but towards the end of the third volume it gets steadily worse, sometimes roving across the page at an awkward angle and becoming even less readable. By this time (c. 1747) Sloane was 86 years of age and evidently needed assistance, for the last few pages of entries are made by different hands, one being that of James Empson, his curator, and subsequently first Keeper of the Natural History Department of the British Museum (d. 1765).

The date of the commencement of the "Testacea" catalogues is not certain, but may have been as early as 1702. At the end of the third volume a list is given of the fossil shells only, selected and summarized from the first two volumes, and made up to mid-October, 1728, amounting in all to 1,757 specimens. The list and summary are arranged methodically, preceded by the catalogue numbers, the highest being No. 4911, the last entry to be made in Volume II. Thus by October, 1728, the collection contained 3,154 recent shells.

Volume III commences with No. 4912 and ends with No. 5846, shortly after September, 1747, six years before Sloane's death. This date is definitely fixed by entry No. 5843, which records the gift of a fossil *Anomia* from Emanuel Mendes da Costa (1717-1791) on 17th September, 1747. Judging from the catalogue numbers alone, it would appear that only 934 specimens were added to the collection from 1728 to 1747, but this is not so, for additional specimens of the same species were added by Sloane to the original entries, each additional item being separated by an oblique line; for example entry No. 1482 (Pl. 2, fig. 2) includes no less than nine specimens under the one number, each acquired and entered at different times.

When the catalogues were begun, wide spaces were left between the entries to accommodate future additions, and even the opposite (blank) page was frequently used (Pl. 2, fig. 3).

From the foregoing it will readily be seen that the collection of recent and fossil

shells was considerably larger than the 5,843 specimens first mentioned by George Edwards in 1758, and repeated by most authors since that date. Most of Sloane's important collections of shells were acquired by 1728, and although a number of them were sorted and catalogued in readiness for work on the second volume of his *Natural History of Jamaica*, published in 1725, it is unlikely that all would be catalogued by 1728. Sloane's own figure of 3,753 recent and fossil shells, recorded in the above work, leaves a balance 1,158 specimens acquired during the next three years, to bring the total to the 1728 figure of 4,911. This increase was perhaps due to the return of Mark Catesby to this country in 1726 from his visit to Carolina and the Bahama Islands.

Except for the earlier entries of specimens (that is to say the first to be entered under each number), the localities and names of the donors, with full references to the literature, were recorded with admirable regularity. Fortunately Sloane worked with Martin Lister's *Historia Conchyliorum* before him, and constantly identified his specimens with the figures therein, usually giving the plate and figure numbers. These references to Lister provide a useful check when numbers on the shells are too faint to be fully deciphered, for so long as two figures of a series of three or four are visible, the correct number can be reached from the entry giving the relevant Lister plate and figure number.

When checking the specimens it was found that not only were they comparable with Lister's figures, but in many instances they were the actual specimens from which the plates were engraved by the author's two daughters, Susanna and Anna Lister, between the years 1685 and 1692. The first part of Lister's *Historia* was dedicated to that "illustrious and excellent man William Courten, of the Middle Temple, London," as a mark of appreciation for the help received by the loan of specimens for illustration, a sentiment that is enlarged upon in the minutely engraved Latin preface, forming pls. 4 and 5, wherein Lister praises Courten "both on account of the extreme industry with which he collects these specimens at great cost, stores them neatly and preserves them carefully, and on account of his remarkable kindness in giving easy access to myself and other research workers in natural history, and in affording them the opportunity of drawing and describing these and other objects of the same kind from his abundant resources."

In the 1770 Oxford reprint of the *Historia* William Huddesford published some of Lister's manuscript notes, from which it is evident that he figured many specimens not to be seen elsewhere from this great collection. Courten is referred to in these notes as "Mr. C." or "Mr. Charlton," an assumed name by which he was known for many years. William Courten died in 1702, and his collection, said by John Evelyn to be worth £8,000 (*Diary*, 16th December, 1686), was bequeathed to Sloane, and this satisfactorily accounts for the presence of the greater number of Lister's figured specimens now recovered. These Courten shells must be the earliest specimens yet recognized in the Museum collections, for Courten, although a contemporary of Sloane, was eighteen years his senior, and would therefore have begun to collect in the early 1660's. A small manuscript catalogue of his "Curiosities" in the British Museum (Sloane MSS. 3988) records several purchases from the widow of John Tradescant in 1667, before that collection, known as "Tradescant's Ark,"

was finally handed over to Elias Ashmole, founder of the Ashmolean Museum, Oxford.

Courten lived much abroad, and had family interests in Barbados through his paternal grandfather, Sir William Courten (1572-1636), who discovered the island and colonized it about 1625 ; this may account for the not infrequent appearance of that locality on Lister's plates.

During the course of the present work the author's attention was drawn to a copy of the Huddesford edition of the *Historia Conchyliorum* in the Radcliffe Science Library by Mr. J. M. Edmonds, of the Department of Geology, University Museum, Oxford. This copy (once the property of a Dr. Combe) contains a number of water-colour drawings which have been inserted by a previous owner, accompanied by proof impressions of the engraved plates, pasted in beside the corresponding figure in the book, or on the opposite blank page, together with the appropriate coloured sketch. Careful examination revealed that these drawings were the originals from which some of the plates were engraved, a fact eventually established by finding a drawing of *Patella testudinaria* L. bearing the initials "A. L." (i.e., Anna Lister) in the lower right-hand corner (Lister Tab. 531).

Several of the drawings were found to be accompanied by manuscript notes in Lister's writing, with a note recording the collector by whom the specimens were lent for illustration. These notes confirm again that many specimens were borrowed, and may be of service in tracing additional and unsuspected Sloane material. The importance of this unique copy of the *Historia* cannot be overestimated, as it proves beyond doubt the origin of several of Lister's figures, and confirms in some measure the statement made by E. M. da Costa (p. 34) that "Dr. Lister, to complete his intended work, carried home all the shells singly to his daughters, to engrave on single or detached copper plates."

It was at first thought that all the engravings were based on these and similar wash-drawings, but on closer examination it was noticed that in every instance they corresponded only with those which have already been shown elsewhere (Wilkins, 1952) to be the work of Susanna Lister, in that a certain amount of cross-hatching was used in the cast shadows of the finished engravings, whereas her fellow artist Anna used only direct graduated lines. This difference in technique seemed to indicate that Anna Lister might have engraved direct on to copper from the actual object, without preparatory drawings; but in following up a statement made by the late Dr. R. T. Gunther (1925, p. 320), to the effect that Martin Lister presented the original drawings used in the *Historia* to the Ashmolean Museum, it was found that preparatory drawings were made for both styles of engraving, and they are still extant in the Bodleian Library, forming the bulky volume catalogued as *Lister MS.9*.¹

This volume appeared, on first sight, to be disappointing. Although a number of the expected wash-drawings were present, the majority appeared to be merely unnumbered proofs of the plates in Anna Lister's style; but closer inspection

¹ Dr. Gunther gives 1685 as the date of presentation of Lister's shells and drawings, obviously a misprint for 1683, the date under which the Lister entry appears in the original Ashmolean *Book of Benefactors* and also in other parts of Dr. Gunther's work.

revealed these to be original drawings in india ink, carried out in the finest brush-work, to be repeated line-for-line in the finished engravings. From a study of these two styles of drawing, it might naturally have been concluded that Susanna Lister engraved from her less laborious, but quite competent wash-drawings, and Anna from her highly finished black and white ones; the single wash-drawing, however, signed "A. L." recorded above, indicates that the latter prepared at least some of the wash-drawings used by her sister. In no instance have any wash-drawings been found that were finally engraved in the unmistakable manner of Anna Lister.

The work of these two seventeenth-century artists has been discussed at some length because of their close association with the considerable number of Sloane specimens used by their father, which may eventually prove to be the only original specimens figured by Lister still in existence; for although Maton and Rackett (1803, p. 140) were able to state that Lister's collection was not deficient, either in number or perfection of specimens—a fact that was evident "from what remains of it in the Ashmolean Museum, Oxford," a recent preliminary search there has failed to reveal any shells recognizable as figured by Lister.

In the light of recent experience at South Kensington, the apparent loss of ancient material at Oxford does not signify that some of it may not yet be found, for the situation may be similar to that of the "cleaning-up" process considered to be the cause of the supposed loss of many Sloane specimens. It is not yet known whether Lister catalogued or numbered his specimens, and in view of the considerable number of shells known to have been borrowed from Courten, Sloane, Lhwyd and other collectors, and those copied from Buonanni and other authors, Lister's collection may not have been as large as might have been expected of the author of the *Historia Conchyliorum*. The composite character of the material used is well indicated by Lister himself in the first paragraph of his preface (*Historia*, Tab. 4.), in which he says, "I have thought it worth while to give a brief account of those in our possession (of which there are quite a number) and in the possession of others in the Museums in this city, and to commit this accurately to writing and copper-plate engraving."

Dr. Gunther's statement regarding the presentation date of the drawings used in the *Historia* appears to need amplification, as it rather gives the impression that the drawings and plates made from them were finished much earlier than appears feasible, for Lister could hardly have been in a position to release all this material two years before the publication of even the first of the four books. His gifts of books and specimens to the Ashmolean Museum were continuous over a long period, and it is therefore likely that these drawings were given at a much later date to supplement the collection of shells, coins and general antiquities which were certainly presented at the opening of the Ashmolean Museum in 1683, but there is no specific mention of the drawings in the *Book of Benefactors* entry made in that year.

The originals of twenty-three of the forty engravings of Sloane specimens have been traced in these two collections of Lister drawings, and it is remarkable, in view of the passing of more than two hundred and sixty years since the commencement of the *Historia*, that it is possible to compare some of the original specimens with the preliminary sketches, finished drawings, and final engravings:

Some of the figured specimens in the *Historia* were collected by Sloane himself,

a fact that is recorded in the Huddesford notes to pl. 65, in which Lister says that the specimen figured was "sent from Jamaica by Dr. Sloane"; this and other land shells were collected and despatched in response to a request made by Lister on the flyleaf of a copy of the first part of his work,¹ presented to the young doctor before his departure for Jamaica (Pl. I, fig. 1). Further evidence of his compliance with this request appears on plates 55 and 62 of the *Historia*, where the name Sloane is engraved under the respective figures. These plates were added after the first publication date of 1685, for Sloane did not sail for Jamaica until September, 1687. He certainly found some "naked snails," one of which was figured on pl. 233 of the *Natural History of Jamaica*, being there described as *Limax nudus, cinereus terrestris*.²

An early collection of some importance acquired by Sir Hans Sloane was that of Doctor Englebert Kaempfer (1651-1716), who visited Japan in his capacity of Physician to the Dutch East India Company between the years 1690 and 1692, and it was during this visit that Kaempfer gathered the information for his exhaustive *History of Japan*, published posthumously, in two handsome volumes, in 1727 at Sloane's expense. A number of shells, some marked "Japan" and catalogued by Sloane as being "among Dr. Kaempfer's shells," are still extant and in good condition.

A close friend and contemporary of Sir Hans Sloane was the enthusiastic collector and Apothecary to the Charterhouse, James Petiver (1658-1718), who was said by John Ray to have "the largest correspondence with the East and West Indies of any man in Europe," a reputation which seems to be borne out by the varied localities from whence his specimens were obtained. When Petiver died, Sloane purchased his collection for the sum of £4,000, and eventually incorporated it with his own; the frequently appearing letter "P" after entries in the catalogues and on the specimens themselves indicates the large number of shells contained in the collection at that time. Petiver figured and described many of these in his own publications, which were considerable, commencing with the *Museum Petiverianum* in 1695. Ten parts, or "centuries," were finished by 1703, after which he started his *magnum opus*, the *Gazophylacium Naturae et Artis*, published in ten parts, each with ten plates, completed in 1709.

This work, to all intents and purposes, formed a series of illustrated catalogues of his collections of mammals, birds, insects, plants and shells, gathered from all parts of the known world by his many correspondents, to whom acknowledgments were frequently made at the foot of the engraved plates.

Several contributions were made by Petiver to the *Philosophical Transactions* between 1698 and 1717, relating to his acquisitions of shells, and these, together with references to the *Gazophylacium*, were duly noted by Sloane when cataloguing the actual specimens; thus the phrase "designed by Mr. Petiver for his *Gaz. Nat.*"

¹ This copy, still extant in the British Museum, is catalogued under the earlier title of *De Cochleis*, which was designed by the author for exotic land shells only, until he changed his mind to make it a general work, after completion of the first book. The erasure of the word *Exotica* can be seen in several of the plates (see da Costa 1776, p. 34).

² For a discussion and synonymy of this slug see Cockerell & Collinge, *The Conchologist*, vol. ii, p. 217, 1893.

occurs from time to time throughout the catalogues. A number of these figured specimens marked by Sloane and Petiver have been recovered, and will be more fully noted in the relevant part of this paper.

References were also made by Sloane to the *Monthly Miscellany* or *Memoirs for the Curious*, a collection of articles on various subjects by "Divers Curious Persons" and conducted by Petiver himself. Three volumes appeared between 1707 and 1709 and included several items on shells from the pen of the compiler, the most important being one on some bivalve shells brought from the coasts of India. These volumes are now extremely rare; the only two copies so far traced are in the library of the British Museum (Bloomsbury).

No account of the collections of these two contemporaries, Sloane and Petiver, can in any way be complete without mention of at least a few of the many collectors in the field, who contributed so much to them. Apart from Sloane's early visit to Jamaica, neither he nor Petiver travelled far afield in search of material for their collections, but relied almost exclusively on the services of the more venturesome of their friends and professional colleagues who could be persuaded to send whatever curiosities they found during their travels abroad. Several of these contributors were surgeons or officers in the service of the East India Company during its early and troubled days in India and China, so that a great number of shells were received from such places as Fort St. George (Madras), Surat and Chusan, where British factories had been, or were in process of being, established.

James Cunningham, ill-fated surgeon to the East India Company, sent consignments to both Sloane and Petiver from Emuy in 1698, the Island of Chusan in 1700, and from Pulo Condore in 1702-3, several being reported upon almost immediately by Petiver in the *Philosophical Transactions* for 1698 and 1701. These years were particularly fruitful for the Sloane and Petiver collections, for other consignments of plants and shells were sent by Samuel Brown, a surgeon at Madras; Father Kamel (or Camelli), the Jesuit priest residing at Manila in the Philippine Islands, and a frequent correspondent of John Ray; Sylvanus Landon and Rowleston Jacobs from the Moluccas; the Rev. Hugh Jones from Maryland, and Dr. Hermann from the Cape of Good Hope.

A large series of shells was received about this time from the Straits of Magellan collected by Mr. Handisyd, one or two of which still survive with the number and locality written on the shell. At a somewhat later date (1705) a collection of shells was received by Petiver from Madame Williams in Carolina, and described by him in the *Philosophical Transactions* in the same year. A few of these still exist marked with the letters "CAR."

An interesting and even romantic name which occurs in the catalogues is that of William Dampier (1652-1715), navigator and buccaneer, who is known to have taken considerable interest in the natural history of the countries he visited. Thus in his *Observations on the Coast of New Holland*, 1699, the following passage occurs regarding the shells observed in Sharks Bay: "Of shell fish we got here muscles, periwinkles, limpets, oysters, cockles, etc. The shore was lined thick with many other sorts of very strange and beautiful shells, for variety of colour and shape, most finely spotted with red, black or yellow, etc., such as I have not seen anywhere but

this place. I brought away a great many of them, but lost all except a very few, and those not of the best." The few specimens extant in the collection given to Sloane by Dampier himself, belong to a later period, being catalogued as from "Dampier's 2nd circumnavigation"—probably the voyage made in 1708-11 financed by several Bristol merchants with the object of harassing the Spanish shipping in the South Seas. Dampier acted as navigator under Captain Woodes Rogers, who has left an account of the voyage.

Later contributors include Mark Catesby (d. 1749); Peter Collinson (d. 1768), and John Bartram the elder (d. 1777), each of whom added in some way to the Sloane collection. Mark Catesby, author of the *Natural History of Carolina*, appears most frequently in the catalogues of his patron, and there is abundant evidence, both in the preface to his work and in the actual catalogue entries, that Sloane was amply recompensed for his generosity in helping to finance Catesby's stay in Carolina from 1722 to 1726.

The opening of the Sloane collection to the public in 1759, under its new title of "The British Museum," and the engagement of the nucleus of a scientific staff, made a vast quantity of unworked material available to authors of the late eighteenth and early nineteenth centuries. Writers on conchology were not slow to grasp this opportunity, and thus began an era of scientific and popular publications that reached its zenith with the production of Lovell Reeve's *Conchologia Iconica* (commenced in 1843 and based largely on Museum material).

One of the earliest works to appear within a few years of the transition of the Sloane collection from private hands to a public institution, was the anonymous *Conchology*, usually ascribed to the joint authorship of E. M. da Costa and George Humphreys, published in 1770. The plates were finely coloured and perhaps too elaborate to be produced economically, for the first part was the only one issued, further parts being held up "at least for the present" through lack of suitable encouragement, a situation which da Costa (pp. 51-52) was at some pains to explain, thereby giving a good clue to the actual authorship. Several Museum specimens were included among the excellent figures and, as far as can be ascertained, this is the only work to figure a specimen, quoting an original Sloane number in the text.

George Shaw (1751-1813), Assistant Keeper of the Natural History Department in 1791 and first Keeper of the new "Department of Natural History and Modern Curiosities" instituted in 1806, was one of the most prolific writers of his time on Natural History, but his works were mostly compilations and added little to the Conchological knowledge of his day. Some, at least, of the many coloured plates of shells scattered through the twenty-four volumes of the *Naturalist's Miscellany* (1790-1813) were based on Sloane material, and therefore "drawn and described immediately from nature" as specified on the title-pages, but the majority were copied, often inaccurately, from Knorr (1760-73), Chemnitz (1769-95), and other authors. The plates were engraved by R. Nodder, who seems to have used little, or perhaps too much, imagination in his work, for some of the figures have been found to be mere tracings, apparently transferred to the plates without troubling to reverse them, so that the serious fault of normally dextral shells becoming sinistral frequently occurs. Dr. Shaw has been praised for the "elegant latinity"

of his descriptions, but it would seem that Swainson's characteristic and even pungent accusation of his "habitually purloining from the works of others" may at least have some foundation in fact.

Of greater value were the three volumes of the *Zoological Miscellany* compiled and published by Dr. W. E. Leach from 1814 to 1817, and usually regarded as a continuation of Shaw's series, completed before his death in 1813. Leach was appointed Assistant Keeper under König in 1813, and did much to improve the Sloane collections, which had already begun to deteriorate, owing partly to the imperfect preservation of specimens by the older naturalists. The Sloane shells were evidently examined and several described and figured in the *Miscellany* as new to science. Three of these have been recognized and will be mentioned more fully later.

Another early work, the *Museum Britannicum*, purporting to be a description of the "Magnificent Cabinet, the British Museum," published in folio by J. & A. van Rymdyk in 1778, contained several figures of Sloane shells; in particular a plate devoted to the *Pinna*, "*Pinna marina*" or Fan Mussel, with figures of the shell, and a pair of gloves woven from the fibres of its silky byssus, from Andalusia, presented to Sir Hans Sloane by the Duke of Richmond. One of these gloves is still extant and in good preservation.

Dr. Leach's successor, J. G. Children, also used Museum material to illustrate his translation of Lamarck's *Genera of Shells*, which appeared in the *Quarterly Journal of Science* 1822-1823; the drawings for the folding plates, engraved by Basire, were prepared by his daughter, and undoubtedly include a selection of Sloane specimens.

In 1828 William Wood compiled a *Supplement* to the second edition of his *Index Testaceologicus*, originally published in 1825, in which the first attempt was made to bring a practical illustrated index of almost every species of shell known at that time within easy reach of the general public, an object that was achieved with some success by engraving and colouring the figures in miniature, with code marks indicating the actual size of the specimens.

In the preface to his *Supplement* Wood noted that the majority of the shells illustrated were from the British Museum collection, and one or two of these have been identified as original Sloane specimens.

Edward Griffith's 1834 edition of Cuvier's *Animal Kingdom*, of which he and Edward Pigeon produced the volume on the "Mollusca and Radiata," falls into a similar category as Wood's *Supplement*, for a single line in very small type at the foot of the first page of the Index informs the reader that "most of the inedited shells figured are from the collection in the British Museum"; this line takes on its full meaning when it is found that many items in the Index are new names, with short descriptions, apparently contributed by John Edward Gray, who was appointed Assistant in 1824 under J. G. Children.

The possibilities of this volume have not yet been fully explored for Sloane material, but the original of Gray's *Voluta rudis*, Pl. 30, fig. 1 (previously described as *Voluta ferussaci* by Donovan in 1824), has been recovered, and although it bears no Sloane catalogue number, the general appearance of the specimen suggests that it may

be one of the long series of shells received by Sloane from one of its recorded localities, the Straits of Magellan.

By 1836, just seventy-seven years after the opening of the Museum, the Sloane shell collection may be said to have lost a great deal of its identity, for by that time it had become merged with the collections of the Royal Society (presented in 1781), and of the Rev. Mordaunt Cracherode (bequeathed in 1799). Sundry purchases from private collections such as the Earl of Tankerville's in 1825, and the incorporation of the collections of Sir Joseph Banks in 1827, had increased the collection to such an extent that in 1836 J. E. Gray estimated that it consisted of no less than 15,000 specimens (4,025 species). This total appears rather high, but it should be remembered that the Sloane collection itself contained a far greater number of shells than is usually accepted, and also that until 1837, when a separate Department of Geology was created, the general collection included fossil as well as recent shells.

The original collection was finally eclipsed by the acquisition in 1837 of the very fine series of shells formed by W. J. Broderip, F.R.S., which, in the words of Mr. Edgar Smith, "must have altogether altered the character of the National collection." It was probably on this occasion, as already suggested, that many Sloane specimens were cleaned to achieve uniformity with these fresh ones, with the result that catalogue-numbers were either partly or completely obliterated. As the present search for Sloane material continued, it became increasingly evident that this explanation was the right one, and that an excess of zeal on the part of early curators may be partly responsible for the belief of the later curators (notably E. A. Smith) that the original Sloane shells had completely lost their identity.

J. E. Gray (appointed to the Keepership in 1840) was probably the last author to describe Sloane specimens as such, for in 1849 he published Part One of the *Catalogue of Mollusca in the British Museum*, which dealt with the Cephalopoda; this included two new species based on Sloane specimens, *Sepioteuthis sloanii*¹ (previously described in manuscript by Leach) and *Ommastrephes sloanii*, both noted as "Mus. Sloane." The dry gladius of the former, removed by Leach himself, and the animal in spirit are still extant, but only a few fragments of the dried gladius of the latter remain.

In 1850 and succeeding years Dr. Gray compiled several more Mollusca catalogues, marking the species represented in the Museum collection with a "B.M."; specimens whose origin was unknown were marked "Hab-?" and it is highly probable that Sloane material, which had long lost its identity, was unconsciously included in these and other publications in which this prolific author was interested.

As already suggested above, it is likely that a considerable number of Sloane specimens are still unrecognized in the general collection; these may come to light in the course of routine curatorial work, but sufficient have now been recovered to indicate the scope and historical importance of the collection in its original condition, and to make it possible to appreciate the great contribution made to early science by Courten, Sloane, and Petiver.

¹ This is *Sepioteuthis sepioidea* Blainville, a Caribbean species.

2. CATALOGUE OF THE SLOANE SHELL COLLECTION

SECTION I.

Introductory notes

This section of the catalogue deals with specimens figured by Martin Lister in the *Historia Conchyliorum*, the Sloane numbers and modern names¹ being followed by Lister's original Latin descriptions, copied from the engraved title-pages and plates. The specimens are catalogued in the order in which they appeared in the original work. Reference to a later author indicates that the specimen is the original of the figure referred to by that author in his synonymy.

The iconographies of Lister and Petiver were perforce used by the early systematists when compiling their synonymies, and it therefore happens that a number of the originals of figures referred to by Linné, Gmelin, Born, and Lamarck are included in the series of figured specimens recently recognized among the Sloane shells.

According to Hanley (p. 7), Linné, with very few unrecorded exceptions, had examples of the species he described in his own private collection, at the time of publication of the tenth edition of the *Systema*, and from the frequent use by Lamarck of the phrase "mon cabinet" in his own work it is manifest that he was in a similar position. Opinions are therefore divided as to the precise status of the originals of the figures of Lister and Petiver, so often referred to by these authors, to supplement their somewhat meagre descriptions, but whatever the outcome of this difference of opinion, they may at least be regarded as type material of a secondary nature, which would become available in the event of total loss of the author's original specimens.

Lister's *Historia Conchyliorum* was divided into Books, Sections and Headings, approximating in some measure to the Orders, Families and Genera of recent times, but apart from the engraved preface (which deals entirely with remarks on land shells) and separate title pages to each book and section, there was no actual text, all sectional headings and specific descriptions being engraved on the individual plates with the figures. Lister was an excellent anatomist, and it was his intention to follow his volume of plates with anatomical descriptions of every family in its proper order. Had it been at all possible to carry out this plan, it is certain that the clumsy and artificial method he employed would have been greatly modified, but with all its faults, the *Historia* contained the first real attempt at a system of Conchology, and did much to bring that science into repute.

The work was produced at Lister's own expense ("Sumtibus authoris"), the plates being altered, re-numbered and sometimes replaced as his ideas developed; for this reason scarcely any two of the earlier copies are alike. The plates, which amount to 1,067 in the most perfect copies, run consecutively throughout the work, but the figures are numbered as species in the sections, each section commencing with species 1.

¹ The nomenclature used throughout this paper is based on Thiele's *Handbuch*, 1931 and 1935.

The four books of the *Historia* are arranged and dated as follows:

Liber I.	1685.	Tab. 1	-105:	Cochleis Terrestribus.
Liber II.	1686.	„	106-160:	Turbinibus et Bivalvibus, aquae dulcis.
Liber III.	1687.	„	161-445:	Bivalvibus marinis.
Appendix.	1688.	„	446-523:	Conchitis Lapidibus.
Liber IV.	1688.	„	524-1025:	Vermiculi, Dentalia et Patellae.
				Polypis testaceis sive Nautilus.
				Cochleis marinis.
				Buccinis marinis.

Liber IV. 1692 (1697).

Appendix. Tab. 1026-1054: Buccinitis lapidibus.

Mantissa and Appendicis Synopsin. Tab. 1055-1059.

The last five plates seem to have been drawn by different artists, most of the specimens apparently being from collections other than those connected with the present account.

Specimens Figured by Martin Lister
in the
Historia Sive Synopsis Methodica Conchyliorum
1685-1692

Sloane No.

1906. *Strophochilus almeida* (Spix).

Liber I. *Pars Prima, de Turbinibus Terrestribus.*

Sectio I. *de Buccinis Terrestribus a sinistra dextrorsum tortilibus, laevibus, edentulis.*

Tab. 24, species 22. *idem cum proximé superiore ?*

Locality: Indiam Orientalem.

On pl. 23 Lister figured a fully-grown *Borus oblongus*, together with the large egg and recently emerged young shell, and it appears from the description that he thought his species 22 might be a further growth-stage of *Borus*; but on this occasion Lister's usual good judgment was at fault, the shells there figured belonging to an entirely different species. The sculpture has been obliterated by polishing, a fact that is indicated effectively by the strong high-lights shown in the figures.

1963. *Acavus haemastoma* (Linné) var. *melanotragus* (Born).

figs. 4-8.

Liber I. Sectio 6. *de Turbinibus terrestribus.*

Tab. 45, species 43. *cochlea latis et nigricantibus facii donata.*

1993. *Ampullarius (Ceratodes) cornuarietis* (Linné).

figs. 9-12.

Liber II. Sectio 3. *de Cochleis fluviatilibus compressis.*

Tab. 136, species 40. *cochlea maxima, compressa fasciata.*

Linn. Syst. Nat. ed. 10 (*Helix*), 1758, 771; ed. 12, 1767, 1244.

—?. *Pecten (Chlamys) squamosa* (Gmelin).

figs. 16-18.

Liber III. *Pars prima, de bivalvibus imparibus testis.*

Sectio I. Caput 4. *de Pectinibus inequaliter auritis, Dentatis.*

Sloane No.

Tab. 184, species 21. (No specific description.)

J. F. Gmelin in *Linn. Syst. Nat.*, ed. 13 (*Ostrea*), i, 1790, 3319.

The following description of this specimen was written by Lister in one of the Huddesford notes, and although it suits the shell admirably, it was not engraved on the plate :

184.21. " This is the toothless under shell of a Scallop with a flat rib ; it is smooth and curiously marbled with a white and dark hair colour."

It is of interest to note that Lister was far in advance of his time in dividing the species of *Pecten* into groups, based on the equality or inequality of the valves and " ears " of the shells, and the attention given in his descriptions to the number of ribs and varying character of shell sculpture, is comparable with the importance attached to these same characters in the Pectinidae by present-day taxonomists.

1040. *Placenta placenta* (Linné).Liber III. *Pars secunda, de bivalvibus paris testis.*Sectio 1. Caput 2. de *Pectinibus binis apophysibus longis conjunctis.*Tab. 225, species 60. *Pecten planus pellucidus.*Tab. 226, fig. 61. *Idem ex interna parte.**Linn. Syst. Nat.* ed. 10 (*Anomia*), 1758, 703 ; ed. 12, 1767, 1154.3722. *Arca (Cunearca) brasiliiana* Lamarck.Liber III. Sectio 2. Caput 1. de *Pectunculis polyleptoginglymis ex altera parte productione.*

Tab. 230, species 64a. (No specific description.)

1387. *Arca (Scapharca) granosa* Linné.Liber III. Sectio 2. Caput 2. de *Pectunculis polyleptoginglymis margine rotunda, striatis.*Tab. 241, species 78. *Pectunculus striis magnis muricatis donatus.*164. *Panopea glycymeris* (Born).Liber III. Sectio 10. Caput 1. de *Chamae, ab altero tantum latere ferè naturaliter hiantibus.*Tab. 414, species 258. *Chama glycymeris Aldrovandi.**Locality* : Maris hispanice mediter. (Lister).I. Born, *Index Mus. Caesarei Vindobonensis (Mya)*, 1778, 10.Synonym : *Panopea Aldrovandi* Menard de la Groye.Menard de la Groye, *Ann. Mus. Hist. Nat. (Paris)*, 9, 1807, 136.

Renamed by Menard when founding his genus *Panopea*, in honour of Aldrovandus, who was the first to describe and figure this shell in 1610. Born's own figure and references to Aldrovandus and Lister show his *Mya glycymeris* to have priority.

745. *Pholas (Monothyra) orientalis* Gmelin.

figs. 19-21.

Liber III. Multivalvium. Sectio 1. de *Pholadibus, i.e., trium testarum conchis, cardinibus oculis quibusdam quasi perforatis.*Tab. 431, species 274. *pholas albus, angustus, ad dimidium fere dorsi laevis.*J. F. Gmelin in *Linn. Syst.*, ed. 13 (*Pholas*), i, 1790, 3216.

Sloane No.

1013. *Patella granularis* Linné.

fig. 29.

Liber IV. de Buccinis Marinis. Sectio 1. Caput 3. de *Patellis vertice integro, striatis, margine quasi radiata.*

Tab. 536, species 15. *Patella subfusca, exiguis tuberculis, secundum strias, exasperata.*

Linn. Syst. Nat., ed. 10 (*Patella*), 1758, 782; ed. 12, 1767, 1258.

1105. *Capulus (Krebsia) intortus* Lamarck.

fig. 30.

Liber IV. Sectio 1. Caput 5. de *Patellis vertice adunco, margine obliqua.*

Tab. 544, species 32. *Patella alba hirsuta striata, vertice intorto.*

Locality: Barbados (Lister).

3696. *Natica lineata* Lamarck.

Liber IV. Sectio 5. Caput 1. de *Cochleis Marinis apice brevi, umbilicatis, sinu aurito.*

Tab. 559, species 1. *Cochlea albida, crebris lineis subrufis transversim et undatim ductis depicta.*

Lamarck, *An. Sans. Vert.* vi, 1819, 201.

748. *Natica canrena* (Linné).

Liber IV. Sectio 5. Caput 1.

Tab. 560, species 4. *Cochlea fusca, cujus lineas spirales aliquot albicantes.*

2166. *Natica cancellata* Lamarck.

Liber IV. Sectio 5. Caput 1.

Tab. 561, species 8. (No specific description.)

749. *Natica (Polynices) duplicata* (Say).

Liber IV. Sectio 5. Caput 1.

Tab. 562, species 9. *Cochlea alba, umbilico, Pulvinata margine circumdato, clavicula compressa.*

Locality: Campeche. Ind. Oce. (Lister).

1517. *Natica millipunctata* Lamarck.

Liber IV. Sectio 5. Caput 1.

Tab. 564, species 11. *Cochlea clavicula compressa, punctis rufis densi depicta.*

Lamarck, *An. Sans. Vert.*, vi, 1819, 200.

1584. *Natica fulminea* (Gmelin).

fig. 23.

Liber IV. Sectio 5. Caput 2. de *Cochleis marinis apice brevi umbilico simplici.*

Tab. 567, species 17. *Cochlea clavicula compressa, lineis rufis undatis dense depicta.*

J. F. Gmelin in Linn. Syst. Nat., ed. 13, i, 1790, 3672.

2701. *Turbo (Lunella) porphyrites* (Martyn).

Liber IV. Sectio 5. Caput 4. *Cochleis marinis, basi brevi, apice ad oris initium parum elato.*

Tab. 576, species 29. *Cochlea subviridis, umbilicata variegata.*

209. *Turbo marmoratus* Linné.

Liber IV. Sectio 5. Caput 6. de *Cochleis marinis, apice mediocriter producta, ore edentulo, laevibus.*

Tab. 587, species 46. (No specific description.)

Sloane No.

1108. *Turritella exoleta* (Linné).

figs. 13-15.

Liber IV. Sectio 5. Caput 7. de *Cochleis marinis*, apice mediocriter producta, striatis.

Tab. 589, species 53. (No specific description.)

The Sloane shell reproduced on plate 5 was selected from several examples in the collection, previous to a sight of the Bodleian drawing and now reproduced above it on the same plate. From this it will be seen that the original, which agrees with the engraving as far as the penultimate whorl, was made from a damaged specimen lacking the full aperture.

A close study of Lister's plate reveals the fact that the damaged shell was originally engraved as shown in the drawing, the incomplete last whorl being later removed and completed from a more perfect specimen. The added portion is somewhat darker than the rest of the figure, also faint traces of the original shape are still discernible inside the aperture.

This engraving contains the work of both the artists, for the upper whorls are definitely the work of Susanna Lister, the alteration being carried out in the firmer style of Anna.

Although the Sloane specimen cannot now be claimed as the original of the figure, it has been allowed to remain as an example of the care taken by Lister to make his figures as perfect as possible. Several abandoned drawings, and even finished engravings, of imperfect specimens have been seen among the Bodleian and Radcliffe collections.

2659. *Turritella variegata* (Linné).

fig. 27.

Liber IV. Sectio 5. Caput 9. de *Cochleis marinis*, clavicula tenuis et longissima, laevibus.

Tab. 593, species 61. *Cochlea variegata parvum aut leviter striata parte orbis superioris cujusq; fortiore.*

Although this figure was not referred to by Linné in either the 10th or 12th edition of the *Systema*, Hanley (p. 350) states that "List. 593" was added to the synonymy in a copy of the 12th edition, corrected and enlarged by Linné for his projected 13th edition.

2243. *Cypraea mauritiana* Linné.

fig. 22.

Liber IV. Sectio. 10. de *Rhombis sive strombis* (pars prima).

Caput 8. de *Rhombis edentulis*, ore patulo, clavicula, compressa.

Tab. 748, species 43. *Rhombus tenuis, ex fusco nebulatus, fasciatusq.*

This figure is of a juvenile shell which had not passed the thin, sharp-lipped stage of growth, and was therefore mistaken by Lister for a thin species of *Conus*.

2239. *Conus (Chelyconus) janus* Hwass.

fig. 25.

Liber IV. Sectio 10 (pars secunda). *Rhombis cylindro pyramidalibus.*

Caput 5. de *Rhombis fasciatis.*

Tab. 785, species 33. *Rhombus ex rufo fasciatus et undatus, clavicula tenui et acuta.*

Hwass in J. G. Bruguière, *Ency. Meth. (Vers)*, (2), 1792, 690.

1623. *Conus (Leptoconus) generalis* Linné.

Liber IV. Sectio 10 (pars secunda). Caput 5.

Tab. 786, species 35. *Rhombus fasciatus et undatus clav. tenui.*

Linn. Syst. Nat., ed. 12, 1767, 1166.

Sloane No.

1797. *Cymbium tessellata* Lamarck.

fig. 28.

Liber IV. Sectio II. de *Buccinis columella dentata*.Caput. I. de *Buccinis Persicis dictis*.Tab. 798, species 4. *Buccinum P. fasciatum, clavicula muricibus coronata*.Fig. 5. *An idem, corona detrita?*

The original of fig. 5 is a juvenile specimen, in which Lister had imagined the spines to have been worn away, but actually they had only just commenced to form, the first being clearly shown at the suture. A fully grown shell with the full corona of spines was given in the previous plate (Tab. 797), with the description quoted above. The figure was copied, with acknowledgments, from Wenceslaus Hollar, who is said by Hind (p. 9) to have produced a series of thirty-eight plates of shells, probably from the collection of the Duke of Arundel, about 1650, and there is little doubt that Lister gained inspiration from Hollar's work.

— ? *Voluta (Aulica) scapha* Gmelin.

figs. 31–32.

Liber IV. Sectio II. Caput I.

Tab. 799, species 6. *Buccinum persicum undatum, clavicula, paululum exerta*.J. F. Gmelin in *Linn. Syst. Nat.*, ed. 13, i, 1790, 3468 (*Voluta*).

Repeated examination of this shell has failed to reveal any trace of a Sloane number, but the excellence of the figure leaves no doubt whatever that it is the original specimen drawn by Anna Lister in 1688.

2374. *Cymbium aethiopicum* (Linné).

Liber IV. Sectio II. Cap. I.

Tab. 801, species 7b. (No specific description.)

J. F. Gmelin in *Linn. Syst. Nat.*, ed. 13, i, 1790, 3465 (*Voluta*).

This figure was included by Gmelin in his synonymy, in addition to those quoted by Linné, and agrees tolerably well with the figures of Rumphius and Argenville, usually considered by authors to conform to the original description.

1578. *Lathyrus (Leucozonía) cingulifera* (Lamarck).

fig. 24.

Liber 4. Sectio II. Caput 2. de *Buccinis Musicis dictis*.

Tab. 828, species 50. *Buccinum dentatum, rostratum, fuscum, clavicula muricata*.
Lamarck *An. Sans. Vert.* vii (*Turbinella*), 1822, 107.

3871. *Rostellaria rectirostris* Lamarck.

figs. 33–35.

Liber IV. Sectio 12. de *Purpuris Bilinguibus*.Caput. I. de *Purpuribus Bilinguibus laevibus*.

Tab. 854, species 11. *Buccinum B. laeve, clavicula longissima, rostro tenui cornuto, labro muricato*.

Lamarck, *An. Sans. Vert.*, vii, 1822, 192.2816. *Strombus tricornis* Lamarck.Liber IV. Sectio 12. Caput 4. de *Buccinis Bilinguibus digitatis*.

Tab. 873, species 29. *Buccinum Bilinguibus majus, ex rufo radiatum, muricatum, unico digito in imo labro*.

Lamarck, *An. Sans. Vert.*, vii, 1822, 201.2276. *Busycon pyrum* (Dillyn).

fig. 26.

Liber IV. Sectio 13. de *Buccinis ventricosus clavicula minus exerta*.Caput. I. de *Buccinis Ampullaceis, laevibus, aut certè minus asperis*.

Sloane No.

Tab. 877, species 1. (No specific description.)

This is one of the few shells to bear an original Courten label, which gives the locality of the specimen as "Bay of Campeche." This label must have been in existence in Lister's time, and it is curious that he did not add this locality to his plate.

— ? *Galeodes bucephala* (Lamarck).

Liber IV. Sectio 13. Caput 1.

Tab. 885, species 6b. (No specific description.)

2303. *Galeodes galeodes* (Lamarck).

Liber IV. Sectio 13. Caput 1.

Tab. 895, species 15. *Buccinum A. grave, subfuscum, rostro leviter umbilicato sive sinuoso, muricatum, clavicula compressa.*

— ? *Strombus pugilis* Linné.Liber IV. Sectio 13. Caput 2. de *Buccinis ampullaceis muricatis.*

Tab. 906, species 26. (No specific description.)

Linn., *Syst. Nat.*, ed. 10, 1758, 744; ed. 12, 1767, 1209.

This shell is a monstrosity, in which the normally sharp spines are flattened and paddle-shaped; references to the figure given by Lister head the Linnean synonymies in the tenth and twelfth editions of the *Systema*, in both of which the further references given are to figures of the normal form.

One explanation for the inclusion of the monstrosity may be that the name was given in the first place to Lister's figure, before normal examples had come to the author's notice, an explanation that is supported by the aptness of the name *pugilis* for the monstrosity rather than the normal form.

According to Hanley (p. 269), the reference to the figure was erased from Linné's corrected copy of the twelfth edition.

— ? *Murex (Homalocantha) rota* Mawe.

Liber IV. Sectio 13. Caput 2.

Tab. 906, species 25. (No specific description.)

1481. *Fasciolaria distans* Lamarck.

figs. 36-38.

Liber IV. Sectio 14. *Buccinis et Rostratis et clavicula productione.*Caput 1. de *Buccinis utrinq. productionibus, Laevibus.*

Tab. 910, species 1. *Buccinum Rostratum, ponderosum, laeve, raris lineis rufis circumdatum.*

Locality: Campeche (Lister).

Lamarck, *An. Sans. Vert.* vii, 1822, 119.

This shell stands in close relationship to Lamarck's type, as it was the only one referred to in his synonymy.

— ? *Fasciolaria gigantea* Kiener.

Liber IV. Sectio 14. Caput 2. de *Buccinis utrinq. productionibus, striis densis et tenuioribus exasperatus.*

Tab. 931, species 26. *Buccinum R. duplicibus lineolis subfuscis circumdatum, inter sinus nodosum.*

There are two plates numbered 931, the first only being given a species number and description, and it has therefore been concluded that Lister considered the specimen on the second (folding) plate, showing a full-sized figure of *F. gigantea*, nineteen inches in length to be a large example of his species 26, (*Fasciolaria trapezium* Lamarck,) the description being intended for both figures.

Sloane No.

— ? **Bursa** (*Bufonariella*) **scrobiculator** Linné.

Liber IV. Sectio 14. Caput 4. de *Buccinis utring productionibus striis Pauciosibus, labro duplicato donatis.*

Tab. 943, species 39. *Buccinum R. labro duplicato, dentato, duplici serie sinum cavato.*

Linn. *Syst. Nat.*, ed. 12 (*Murex*), 1767, 1218.

3891. **Murex** (*Muricantha*) **imperialis** Swainson.

Liber IV. Sectio 14. Caput 4.

Tab. 944, species 39a. *Buccinum R. labro duplicato, dentato, duplici serie sinum cavato.*

143. **Charonia** **lampas** (Linné).

Liber IV. Sectio 15. de *Buccinis quibus rostrum Breve oris hiatum non excedens.*
Caput 2. de *Buccinis brevi rostris striatis.*

Tab. 960, species 13. *Buccinum brevi rostrum, maximum, ex rufo nebulatum, nodosum.*

Synonym **Charonia nodiferum** (Lamarck).

Lamarck, *An. Sans. Vert.* vii (*Triton*), 1822, 179.

3924. **Cassis** (*Phalium*) **strigata** Gmelin.

Liber IV. Sectio 15. Caput 7. de *Buccinis auritis, sive rostro Recurvo donatis, ventricosus.*

Tab. 1014, species 78. (No specific description.)

Synonym: **Cassis** (*Phalium*) **zebra** Lamarck.

Lamarck, *An. Sans. Vert.*, vii, 1822, 223.

In addition to the Sloane specimens already catalogued and recognized as those figured by Lister, there is a balance of some fifty numbered shells for which localities or donors' names do not appear in the Sloane catalogues, and as most of them are the first, and sometimes the only specimens entered under individual numbers, it is reasonably certain that they were from the collection of William Courten, bequeathed to Sloane in 1702. Certain of these shells bear a close resemblance to Lister's figures, and although they may not prove to be the actual specimens used, they can safely be regarded as contemporary with them. The series includes some of the oldest specimens in the collection, and it may be of interest to record a few of these in detail.

Sloane No.

3805. **Ampullarius urceus** (Müller).

O. F. Müller, *Verm.* 11, 174, sp. 360 (*Nerita*), 1774.

Liber II. Sectio 1. de *Cochleis Fluviatilibus.*

Tab. 125, species 25. *Cochlea maxima, è viridi nigricans.*

Lister's figure and description indicates that the black periostracum, characteristic of the species, was present in his specimen, but the Sloane shell is practically white, this thin covering having been peeled off or removed by cleaning. The figured shell has a thickened callosity on the columellar, but in other respects closely resembles the contemporary Sloane specimen. Müller gave the locality

Sloane No.

as "In Insulis Indiae," and noted that the species was edible. Dillwyn (p. 918) ends his description of this species with the remark that "it is generally known by the name of the *Cocoa Nut Snail*." Alderson, who considered Lister's figures of *Ampullariidae* to be the earliest extant (p. vii), gives a wide range for this species in the West Indies and confirms Müller's note that *A. urceus* is edible, adding that the flesh of the animal is highly valued by the Indians as a restorative to sobriety following debauches of the piwarri drink (p. 11).

488. *Isocardia humana* (Linné).

Liber III. Sectio 3. Cap 3. de *Pectunculis laevibus Rostro Recurvo*.

Tab. 275, species 111. *Bucardia* Aug. Scilla.

Locality: Mar. Adriatico (Lister).

This species, formerly known as *Isocardia Cor* (L.), the Heart Cockle, was catalogued by Sloane as "the original shell of the *Bucardites*," meaning no doubt that it was the living representative of the fossil forms, for which the name *Bucardia* had been used by Imperato as early as 1599. Augustino Scilla used the name in 1670 in his work on the comparison between recent and fossil shells, giving an excellent figure (tab. xvi, f. A.A.), and the description "Rarissima concha, quae bucardia appellata." References to both these early workers appear in the Sloane catalogue in the handwriting of James Empson. Lister gave two figures of this shell on his plate 275, the upper showing the interior of one valve, and the lower a complete specimen with the valves partly open, copied from Buonanni (fig. 88). The right valve of the Sloane specimen fits the upper figure precisely and may well be the original of Lister's plate.

895. *Borus oblongus* (Müller).

Surinam (Sloane).

O. F. Müller. *Verm.*, 11, 86, sp. 284 (*Helix*), 1774.

Liber I. Sectio 1. de *Buccinis Terrestribus a sinistra dextrorsum tortilibus, laevibus, edentulis*.

Tab. 23, species 21. *Buccinum admodum crassum, ingens, quinq, orbium, laeviter purpurascens*.

Surinam (Lister). Oviparum.

From contemporary correspondence it appears that the specimens figured on Lister's plate were received by Courten from Surinam early in 1690, and passed on to Lister for illustration. The figures show an adult *B. oblongus*, with a thickened lip, together with the large egg, and a recently emerged young shell. The brief mention of the arrival of this novelty in letters passing between Lister, Ray and Lhwyd, during April and May, 1690, gives the impression that they were not a little puzzled by the size of the young shells received compared to the egg, but as the contents of Lister's letter is not known, the correct explanation of his problem must remain in doubt.

Lister apparently first mentioned the matter in a letter to Lhwyd dated 4th April, 1690, for in a postscript to his reply the following month (quoted by Gunther, 1945, p. 102) Lhwyd says: "I thank you for yr account of ye shell from Suranam. Its strange if ye young snayles be hard, & twice as big as ye shell immediately upon exclusion." In the interval between his receipt of Lister's letter and his

reply Lhwyd included an account of these "snayles" in a letter to John Ray, who replied on 7th May. 1690, saying: "The snail you write off, received by Mr. Charlton from Surinam is very strange and remarkable. But how ye young snayle hatch't of ye egges should come to be twice so big as ye egges, I understand not." (Gunther, 1928, p. 207.) Lister's figure of the young shell is a little larger than the egg figured on the same plate, and it is quite possible that some of the eggs sent to Courten hatched out, and increased the size of their shells in transit.

Lister hastened to illustrate adult and juvenile shells in an early edition of the *Historia*, where the plate appears without the "Tab 6" added when it was re-issued as pl. 6 in his *Exercitatio Anotomica*, published in 1694. The altered plate, still bearing the "Tab. 6," was replaced in its former position, and appeared thus in the second and third (Huddesford) editions. In a copy of the work given by Lister to John Ray (B.M.435, f. 18) the plate appears without heading or number, a fact that provides further proof that most early copies varied in some respect, and confirms the opinion of Da Costa (1776, p. 35) that "a second edition was published at one time, which was soon after the completion of the first edition of 1692."

The specimen of *B. oblongus* figured by Lister appears from the thickened lip to be the variety *crassa* Albers, but the Sloane specimen is normal, a condition that does not affect the opinion that it is contemporary, and probably from the same sending as the figured specimen.

SECTION II.

This section deals with specimens now extant, figured and described by James Petiver from 1698 to 1712, a period which covered the majority of his contributions to the *Philosophical Transactions* (Journal of the Royal Society), *The Monthly Miscellany*, or *Memoirs for the Curious*, and his most important work, the *Gazophylacium Naturae et Artis*. Petiver's main interest seems to have been to obtain complete faunas and smaller localized collections, to be reported upon and kept intact thereafter, an object that is referred to with some warmth in an editorial printed in the *Transactions* for 1703 (pp. 1411-1412) announcing the completion of the first part, or "Decade," of the *Gazophylacium*, in which the writer (surely Petiver himself?) remarks that "one advantage will accrue, by publishing these things in *Decades*, that of preserving them entire, which are too often mangled, scatter'd, or absconded by change of hands." Unfortunately these fears were realized when Petiver's collections came into Sloane's possession in 1718, for although they were duly catalogued, all the specimens from these local collections were added to his own, piecemeal. This was partly due to Petiver's own carelessness in storing his specimens, for in the preface to the *Natural History of Jamaica* (vol. ii, p. 4) Sloane says that "Mr. Petiver put them in heaps, with sometimes small labels of paper, where they were many of them injured by Dust, Insects, Rain, etc.,"; similar confusion reigned among the papers dealing with the collections, and it was only by long and tedious work on the part of the new owner that the material was put in order and catalogued to his satisfaction.

As in the first section of the present catalogue, Petiver's figures and descriptions are arranged in order of publication, with localities and collectors' names, preceded

by the Sloane number and modern name. Full Latin and English descriptions are only given for items from the *Gazophylacium*.

*Specimens Figured by James Petiver
in the
Gazophylacium Naturae et Artis
1702-1709*

Sloane No.

1183. *Trochus radiatus* Gmelin.

Pl. 20, fig. 4. *Trochus Indicus é rubro & pallido radiatus*.
Bay of Bengal. Mr. Stocker.

1108. *Turritella exoleta* (Linné).

Pl. 46, fig. 7. *Unicornu Nevisense, gyris cavis*.
"Hollow twirl'd nevis unicorn."

There is little doubt that, although Petiver had several specimens of this shell, the figure was copied from Lister's plate 589, sp. 53.

2814. *Murex (Bolinus) brandaris* Linné.

Pl. 68, fig. 12. *Murex mediter. aculeis rigidis brevibus*.

"The Mediterranean common thorny Murex. Frequent in the Levant on the European shores." *Mus. Pet. Cat.*, 150.

2166. *Natica cancellata* Lamarck.

Pl. 69, fig. 5. *Cochlea caro. rimis tessellatis undata*.

"Carolina Lattice furrowed, Welsh Pot shell." *Mus. Pet. Cat.*, 566.

1594. *Strombus gigas* Linné. (Juvenile.)

Pl. 74, fig. 1. *Murex Jam. fasciata nodosa*.

"Marbled Jamaica Murex, with knotty Twirls." *Mus. Pet. Cat.*, 579.

1105. *Pileopsis intorta* Lamarck.

Pl. 95, fig. 12. *Patella Barbadosensis cancellata, rostro sinistro*.

"Small Latticed Barbadoes Limpet with a crooked nose tending to the right." *Mus. Pet. Cat.*, 582.

179. *Conus (Rollus) geographus* Linné.

Pl. 98, fig. 8. *Moluccus laevis, ex rufo alboque marmoratus*.

"Light Molucca Cloath-shell." *Mus. Pet. Cat.*, 244.

Linn. Syst. Nat., ed. 12 (*conus*), 1767, 1172.

—? *Cymatium (Distortrix) anus* (Linné).

Pl. 99, fig. 10. *Buccinum Luz. ore parvo valde rugoso & lacerto* (Luzon).

Pl. 74, fig. 9. "An elegant rugged shell with flat lips from Pulo Condore." *Mus. Pet. Cat.*, 238.

Linn. Syst. Nat., ed. 10, 1758, 750; ed. 12, 1767, 1218.

Petiver gave two figures of this shell, one good and easily recognized, the other poor and badly drawn, but not too badly for Linné to recognize, for both figures are quoted in the synonymies of this species in the 10th and 12th editions.

749. *Natica (Polynices) didyma* (Bolten).

Pl. 99, fig. 15. *Cochlea crassa, clavicula compressa*.

"Flat headed Luzone thick shell."

Sloane No.

2846. **Bursa rana** (Linné).

Pl. 100, fig. 12. *Murex alatus, circulis pulchrè asperis.*

"Borneo thorny curl'd *Murex*, brought from that island by Mr. John Rance, Surgeon." *Mus. Pet. Cat.*, 249.

Linn. Syst. Nat. (Murex), ed. 10, 1758, 748; ed. 12, 1767, 1216.

3696. **Natica lineata** Lamarck.

Pl. 101, fig. 9. *Cochlea auriculata fasciis castaneis pulchre obliquiis.*

Collectanea Petiveriana, iii, 297.

"Brought from Bombay by Mr. Alex Christie, Surgeon."

983. **Murex (Acupurpura) ternispina** Lamarck.

Pl. 101, fig. 16. *Buccinum ampullaceum rostratum striatum, triplici ordine muricum exasperatum.*

"From Bombay by Mr. Alex Christie."

1114. **Turritella duplicata** (Linné).

Pl. 102, fig. 20. "Among the Bombay shells collected by Mr. Alex Christie, Surgeon."

The description given by Petiver for this shell refers to *T. variegata*, copied in error from Lister, and noted as such by Sloane, in his own catalogue.

*Specimens Described by James Petiver
in the*

Philosophical Transactions and Memoirs for the Curious
1698-1708

Sloane No.

1982. **Polygyra albolabris** Say.

Maryland, Virginea. Rev. Hugh Jones.

Phil. Trans. No. 246, p. 395, species 3, 1698.

Mem. Cur., p. 97, species 3, 1708.

1810. **Bursa rhodostoma** (Reeve).

Island of Ascension. Dr. James Cunningham.

Phil. Trans., No. 255, p. 295, species 19, 1699.

2220. **Pirula ventricosus** (Sowerby).

Fort St. George. Mr. Edward Bulkley, Surgeon.

Phil. Trans., No. 271, p. 860, species 8, 1701.

1814. **Cerithium nodulosum** Bruguière.

Mauritius. Mr. Roche.

Unicornu *Mauritianum* fasciis nodosis & striatis.

Phil. Trans., No. 271, p. 860, species 10, 1701.

"Mr. Roche first brought me this from Maurice his Island (which Seamen commonly call the Morushias)."

2223. **Conus (Hermes) nussatella** Linné.

Fort St. George. Mr. Edward Bulkley, Surgeon.

"*Rhombus madraspatanica*—*The Caterpillar*."

Phil. Trans., No. 271, p. 860, species 3, 1701.

Sloane No.

2121. *Patella barbara* Linné.

Moluccas. Sylvanus Landon & Rowleston Jacobs.

Phil. Trans., No. 274, p. 927, species 2, 1701.

1458. *Conus (Chelyconus) testudinarius* Broderip.

Moluccas. Landon & Jacobs.

"*Light Molucca Cloath shell.*" —

Phil. Trans., No. 274, p. 929, species 9, 1701.

48. *Fasciolaria trapezium* Lamarck.

Moluccas. Landon & Jacobs.

Phil. Trans., No. 274, p. 932, species 21, 1701.

115. *Telescopium telescopium* (Linné).

Bengal. Mr. Samuel Brown, Botanist.

Phil. Trans., No. 276, p. 1027, species 3, 1701.

2827. *Murex (Muricantha) stainforthi* Reeve.

Fort St. George. Mr. Edward Bulkley.

Phil. Trans., No. 276, p. 1029, species 40, 1701.

3925. *Terebralia sulcatus* (Born).

Bengal. Mr. Samuel Brown, Botanist.

Phil. Trans., No. 276, p. 1029, species 42, 1701.

3976. *Arca (Argina) campechiensis* Gmelin.

Bay of Campeche. Mr. Robert Rutherford.

Phil. Trans., No. 282, p. 1266, species 2, 1702.

3722. *Arca (Cunearca) braziliana* Lamarck.

Carolina. Mr. Robert Rutherford.

Phil. Trans., No. 299, p. 1953, species 5, 1705.

2646. *Natica (Polynices) duplicata* Say.

Carolina. Madame Williams.

Phil. Trans., No. 299, p. 1958, species 29, 1705.

Mem. Cur., g. 125, May, 1708.

750. *Busycon carica* (Gmelin).

Carolina. Madame Williams.

Phil. Trans., No. 299, p. 1958, species 32, 1705.

Mem. Cur., p. 191, July, 1708.

1805. *Busycon carica* (Gmelin).

Island of Triss. Mr. Fyfield, Surgeon.

Carolina. Madame Williams.

Phil. Trans., No. 299, p. 1959, species 35, 1705.

Mem. Cur., p. 190, July, 1708.

1584. *Natica fulminea* Lamarck.

Fort St. George. Mr. Fawcett.

Mem. Cur., p. 125, May, 1708.

Sloane No.

173. *Achatina purpurea* (Gmelin).
Cape Coast.
Mem. Cur., p. 126, May, 1708.
1787. *Conus (Chelyconus) corona-civica* Röding.
Barbados.
Mem. Cur., p. 158, April, 1708.
1387. *Arca (Anodara) granosa* Linné.
Malacca. Mr. Colvill, Surgeon.
"Warty India Barg Cockle."
Mem. Cur., p. 227, August, 1708.
1383. *Arca (Navicula) bistrigata* Dunker.
Borneo.
Mem. Cur., p. 227, August, 1708.
291. *Tridacna imbricata* Röding.
E. Indies.
"Large scallopt basin shell."
Mem. Cur., p. 256, August, 1708.
752. *Gibbula magus* (Linné).
Coast of England, Ireland & "Nova Zembla."
"Knotted Top Shell."
Mem. Cur., p. 286, August (?), 1708.
1108. *Turritella exoletus* (Linné).
Barbados. Mrs. Newport.
Mem. Cur., p. 126, May, 1708.
2659. *Turritella variegatus* (Linné).
Fort St. George. Mr. Fawcett.
Mem. Cur., p. 126, May, 1708.
1109. *Turritella tortulosa* Kiener.
Guinea.
Mem. Cur., p. 126, May, 1708.
Mus. Pet. Cat., p. 69, No. 736.

SECTION III

*Specimens of the Shells Collected by Sir Hans Sloane**During his Visit to Jamaica*

1687-1689

Introductory notes

At the age of twenty-seven Dr. Hans Sloane set sail from Plymouth on 5th October 1687, in the service of the newly appointed Governor of Jamaica, the Duke of Albemarle, arriving safely at that island on 19th December in the same year. His

declared intention when accepting the appointment as Physician to the Duke and his family was to learn and record as much about the medical resources and natural history of Jamaica as his free time from professional duties would allow. Several stops were made during the voyage, the longest being at Barbados, where Sloane spent ten profitable days collecting and making notes upon all he saw, both as doctor and naturalist. The Duke's vessel, the "Assistance," arrived at Port Royal, Jamaica, on 19th December, and from that time until embarking for the return voyage to England on 16th March, 1688-9, Dr. Sloane was continually busy giving medical attention to the European residents and natives of the island, and collecting sufficient natural history specimens to satisfy even his acquisitive tastes. He had many requests from John Ray and other botanists for information which would resolve their doubts about the descriptions of plants to be found in that part of America, and it is remarkable that he found time to attend to these requests, in addition to collecting much of the material to be used later in his voluminous *Natural History of Jamaica*.

The shells found on the shores and in the woodlands of the island were very fully described on pages 227 to 265 of Volume Two, which, for various reasons, did not appear until 1725, nearly thirty-six years after his return from the voyage, and twenty years after the publication of Volume One. During the long interval between Sloane's return and the completion of his work, both Lister and Petiver had figured and described many of the species, and in some instances the actual specimens, included in his chapters dealing with the "Testacea" or shells, and it was probably for this reason that only three of Sloane's large number of plates were devoted to them. Full references to the figures in these previous publications, with copies of the Latin descriptions of Lister and Petiver, were given for each species, followed by additional descriptions and locality notes in English.

In the following catalogue of the surviving specimens of Sir Hans Sloane's Jamaica shells, it has seemed expedient to shorten some of the lengthy English descriptions, unimportant passages deleted being indicated by a series of dots.

CHAPTER I. *Of Land and River Snails*

Sloane No.

1983. *Pleurodonte acuta* (Lamarck) var. *patina* C. B. Adams.

Species I, page 227.

fig. 39.

Cochlea terrestris maxima, compressa, fusca, ore unico dente donato . . . Tab. 240, fig. 6.7. List Hist. Conch., Tab. 95, No. 96? *Cochlea Jamaicensis major compressa unidens*. Pet. Mem. Cur., anno 1708, p. 98, No. 12.

This shell was dark brown on the upper side, and lighter brown on the under, with one dark Belt or Fascia. It was about an Inch and a half in Diameter, compress'd, or a very little raised, had about six spiral circumvolutions, which had on them capillary oblique *Striae*. The mouth was a little purplish, and had in it one tooth. This varies in magnitude being found sometimes not over half the Bigness of this here describ'd.

I found it in Jamaica and brought it hence.

Sloane No.

1357. *Pleurodonte acuta* (Lamarck var. *lucerna* (Müll.).

Species II, page 227.

Eadam paulo minor alba, ore duobus dentibus donato . . . List Hist. Conch., Tab. 83, No. 87. *Cochlea Jamaicensis depressa bidens*. Pet. Gaz. Nat., Tab. 21, fig. 6, Cat. p. 576. Mem. Cur., anno 1708, No. 13.

This is about one third Part less and white, otherwise the same in every respect. I had it with the former.

2008. *Pleurodonte acuta* (Lamarck). Typical.

Species IV, p. 228.

Cochlea terrestris major, compressa, fusca, ore duobus dentibus donato.

This is not over half the bigness of the first, and hath two teeth in its Mouth, and is of a brown colour, otherways exactly like it. I had it with the others.

1695. *Pleurodonte (Eurycratera) aspera* (Férussac).

fig. 41.

Species XI, p. 229.

Cochlea terrestris, maxima, albida, spiris parum elatis, ore tribus dentibus donato, repando . . . List Hist. Conch., Tab. 94, No. 95.

This is two Inches long, about an Inch and a half broad, it consists of three Circumvolutions or *Spirae*, more raised than any of the former, and they end in a large, wide, brownish Purple Mouth, in which are three teeth set close together.

I found this snail in the Inland Woods where it was feeding on the leaves of trees.

CHAPTER II. Of Patellae or Limpets

— ? *Chiton (Acanthopleura) granulatus* (Gmelin).

fig. 45.

Species XI, page 233.

Patella oblonga, articulata, articulis extus, subfuscis, intus, e viridi caerulais . . . Pet. Gaz. Nat., Tab. 1, fig. 3.

This, which sticks to Rocks under the Sea Water in *Jamaica* after the manner of Limpets, is about two Inches long, one broad, made up of eight pieces or joints laid over one another. Each of the six middlemost Joints is striated two ways on each side, and smooth in the Top or Middle, of a dark brown Colour above, and bluish green underneath. The whole Margin is made up of a Skin, on which are many round rais'd Points, which are also on the first and last joints of the shell.

I found it of several Magnitudes, sticking to the Rocks under water, on the North side of the Island of *Jamaica* near Don Christopher's Cove. I have had joints of it from Nieves.

— ? Species XII.

Patella oblonga, articulata, articulis extus albus, intus, e viridi fuscis.

It is the same in every Respect, only the colour on the outside is white and hath no *Striae*, whether naturally, or that a Matter precipitated from the Sea Water hath filled it up, I cannot determine.

These two descriptions refer to the same species, as Sloane seemed to realize, the lack of colour and striae in the latter being due to erosion and exposure to sun and air, a condition to which old specimens living just below highwater mark are particularly liable. The specimen illustrated has a small label attached, bearing the faint trace of the faint trace of a number, and the abbreviation "Jam" (*Jamaica*) in Sloane's writing.

CHAPTER V. *Of Nerits*

Sloane No.

1531. *Nerita polita* Linné.

fig. 42.

Species I, page 237.

Nerita utrinque dentatus ore citrino, eleganter & undatim variegatus. List Hist. Conch., Tab. 600, No. 17.

This is more than an Inch long, half as broad, white, thick, and all over mark'd with undulated and variously shap'd *Fasciae* or Belts of dark brown colour. The mouth is tooth'd towards the *Volutae* and yellow . . . I found it in Jamaica with black and Purplish *Fasciae*, and have it with yellow and reddish *Fasciae*. It comes also from the Island of *Mauritius* near *Madagascar*.

CHAPTER VI. *Of Sea-snails & Trochi*177. *Trochus (Livona) pica* (Linné).

fig. 48.

Species V, page 240.

Trochus maximus, laevis, ex nigro maculatus. List Hist. Conch. Tab. 640, No. 30 . . . Petiver Mus., p. 88, 845. Gaz. Nat., Tab. 70, fig. 9. *The Large Barbadoes Magpie Top-Shell.* Mem. Cur., anno 1708, p. 126.

This shell is three Inches in diameter at the round Base . . . It is very solid and ponderous, smooth, within white and shining, as if silver'd over. The outside is of the same shiny colour, under a crust or outward skin marbled or variegated with white and black spots and streaks.

These are common in the Seas of *Jamaica*, and are eaten by some people, being of various Sizes. They are also found in the Seas near *Barbadoes*, *Nieves*, the River *Missisipi* and the *Bahama* Islands.

752. *Trochus (Gibbula) magus* (Linné).

fig. 44.

Species VII, page 240.

Trochus parvus, striatis, undatim ex fusco dense radiatus. List Hist. Conch., Tab. 641, No. 31 . . . List Hist. Animal. Angl., 166, Titulus 15.

I found this on the Shoars of *Jamaica*, and could observe no difference in it from that met with on the Coasts of *England*, *Scotland* and *Nova Zembla*, from all which Places I have had it brought me.

It appears that this Mediterranean and W. African species could only have been introduced in ballast, as no record of its occurrence in the West Indies has been found to date.

1551. *Astrea (Astraliium) longispina* (Lamarck).

Species VIII, page 240-241.

Trochus planior pyramidalis, striatus, muricibus radiatim ad marginem. List. Hist. Conch., tab. 622 & 623, No. 9. Pet. Mem. Cur., anno 1708, p. 128, No. 19.

The diameter of this at the base . . . is an inch, 'tis half as high from the Base to the *Apex*. It hath several long *apices*, or extant points, along the *Margin* of the *Volutae*, is white and shining like Pearl, when the outward whitish rough skin is taken off.

I found this with other shells on the Coast of *Jamaica*.

1443. *Astrea (Cyclocantha) calcar* (Linné).

fig. 49.

Species VIII, page 240-241.

This specimen was catalogued by Sloane as a variant of the previous species, probably confusing it with the earlier growth stages, which are much flatter than the mature shells.

Sloane No.

1444. *Astraea (Lithopoma) imbricatum* (Gmelin).

Species IX, page 241.

Trochus pyramidalis, albidus, striatus, muricatus. List Hist. Conch., Tab. 628, No. 14 . . . Pet. Mem. Cur., anno 1708, p. 128, No. 18 ?.

This is about an Inch in Diameter at the Base, about an Inch and a half high from the Base to the *Apex* or End of the circumvolutions, which are muricated for their whole length as the former, and have besides transverse Ridges and Furrows very frequently of a reddish white colour.

I found one of them on the Shoar of *Jamaica*, with a Hermit Crab in it.

Two specimens of this species are extant, the smaller being the one described above, collected by Sloane himself, and the other from Petiver's collection recorded in 1708. It is quite possible that the former is the shell figured by Lister, for the locality "*Jamaica*" is engraved on the plate.

1916, 1917. *Astraea (Lithopoma) tuber* (Linné).

Species X, page 241.

Trochus major variegatus, ex viridi rufoq; basi laevi, striis multum extantibus distinctus. List Hist. Conch., Tab. 646, No. 38 . . . Pet. Mem. Cur., anno 1708, p. 128, No. 20.

This is about an Inch and a half in diameter at the Base where it is smooth. It is about an Inch high from thence to the *Apex* or End of the *Volutae* which are all underneath like Mother of Pearl and shining, and has a few transverse Ribs and hollows between . . . It is cover'd all over with a white Crust and with Lines and Spots of reddish green and brown.

I found it plentifully on the Shores of the Island *Jamaica*.

CHAPTER VI. Of Buccina whose Spirae are Short

1787. *Conus (Stephanoconus) coronacivica* Röding

fig. 46.

Species VII, page 243.

Rhombus Cylindro pyramidalis, brevis, minor, striatus, e fusco & albo variegatus, clavicula levita nodosa & mucronata.

This shell is more than an Inch long, a little more than half an Inch broad . . . The opening of the mouth is very narrow and straight, and there are extant points or blunt *apices* like knots on the Ends of the Circumvolutions . . . and the first and greatest Part of the shell is very pleasantly clouded with white and brown clouds variously shaped covering it, over which are discernable some *striae*.

I found it on the Shores of *Jamaica*.

CHAPTER VII. Of Buccina whose Spirae are longer and smooth

1482. *Fasciolaria tulipa* (Linné).

Species VII, page 245.

Buccinum rostratum grande, raris lineis circumdatum laeve, non nisi ima parte cujusq; orbis striata. List Hist. Conch., Tab. 911, fig. 2. *Buccinum Jam. fasciatum tenue*. Pet. Mem. Cur., anno 1708, p. 190, No. 14.

This is about four Inches long, one and a half broad in the middle where broadest . . . 'tis all over smooth and of a purplish white colour, having large Spots of a brown colour all over the *Volutae*, and several brown Lines running spirally

the same course, so that I am something doubtful if that from *Campeche* figur'd by Dr. Lister *ib.* Tab. 910 fig. 1 be not the same shell, only the marbled brown spots worn out and the lines remaining. It hath a wide, long Mouth without teeth.

I found these of several Magnitudes and Ages in the Seas adjoining to Jamaica, and have had it from the Island *Beata* and River *Mississippi*.

Lister, Petiver and Sloane had each noticed certain differences between the several examples of this shell known to them, Lister going so far as to figure and describe a smooth, pale form with widely spaced lines separately, but it was not until 1822 that Lamarck confirmed the suspicions of these early workers, and finally separated the shell now known as *Fasciolaria distans* from its congener *F. tulipa* (Linné).

CHAPTER VIII. *Of Buccina whose Spirae are long and muricated*

Sloane No.

1594. *Strombus gigas* Linné.

Species I, page 247-248.

Buccinum bilingue maximum, labro maxime patente purpureo, clavicula muricata.
List Hist. Conch., Tab. 863, depict . . . Pet. Mem. Cur., anno 1708, p. 189, No. 1.

This is one of the largest Shells, very weighty and ponderous . . . The inside is extremely well polish'd and of a fine scarlet colour, and is made into Buttons being set in Gold or Silver . . .

I had it from *Jamaica*. It is also found near *Cartagena, in America*, and in great plenty on the Shores of the Leeward Part of *Barbados*, where they are eaten and taste like tripe. They likewise there make Lime of them.

Species II. *Idem minus*.

This is perhaps not differing but only the younger ones of the former. It is not striated nor of so fine a red Colour within, but otherwise the same. I had it with the former.

It appears from Sloane's description that the shell figured by Lister was in his own collection, but no fully-grown specimens bearing a catalogue number have yet been located, only a young one, bearing a particularly clear number and obviously belonging to his "*Idem minus*" quoted above.

1594. *Strombus gigas* Linné. *Juvenile*.

fig. 43.

Species III, page 248.

Buccinum ampullaceum striatum, clavicula muricata, apertura leviter purpurascente.
List Hist. Conch., Tab. 886, fig. 7 . . . 887, fig. 8, & 888, fig. 9. *Murex Jamaicensis, fasciata, nodosa.* Pet. Cat., p. 579. Mem. Cur., anno 1708, p. 189, No. 6.
Marbled Jamaica Murex with Knotty Twirls. Gaz. Nat., Tab. 74, No. 1.

The Sloane and Petiver specimens described above are both early growth stages of the previous species; the marbled pattern frequently persists until the formation of the large spines, eventually becoming covered up by the succeeding whorls. All three of Lister's figures quoted above are various early stages of *S. gigas*, and apparently regarded by him as fully grown shells.

The fact that Sloane catalogued the marbled form under the same number as the later stages indicates that he suspected that they were all one and the same species.

Sloane No.

- 1130.
- Cerithium (Rhinoclavis) articulatum*
- Adams & Reeve.

Species IV, page 248.

fig. 40.

Buccinum recurvirostrum, claviculatum, striatum & asperum. List Hist. Conch., Tab. 1018, fig. 80.

This is about an inch long, half an Inch in Diameter near the mouth, where it taper'd to the End. It hath a round Mouth, in one Corner of which is a crooked Bill or Rostrum . . . I found it on the Shores in Jamaica.

- 1578.
- Lathyrus (Leucozonia) cingulifera*
- (Lamarck).

Buccinum rostratum, dentatum, fuscum, spiris nodosis. List Hist. Conch., Tab. 828, No. 50. Pet. Mem. Cur., anno 1708, p. 158, No. 32.

This is about an Inch long . . . The *Spirae* are brown, striated, and have *Nodi*, or blunt *Apices* the Length and Duct of their Course . . . The mouth is narrow and tooth'd. It is sometimes twice as large.

I had it from *Jamaica, Barbados* and *St. Christophers*.

There are two specimens of this species in the collection, one of which is the shell figured by Lister on Tab. 828 of the "*Historia*."

- 3891.
- Murex (Muricantha) imperialis*
- Swainson.

Species IX, page 250.

Buccinum rostratum, labro duplicato, longius, striis latis & eminentibus distinctum, sinuosum. List Hist. Conch., Tab. mut., 944 depict.

This is about three Inches long, two broad in the Middle . . . and as high. 'Tis all over of a whitish colour, and thick set with extant Ridges, and between them deep furrows running the length of the *Volutae*.

I found this shell on the Shore of *Jamaica*.

Sloane appears to have been mistaken in his measurements, for the original shell described above is somewhat larger than stated, and still further enlarged in Lister's figure, but there is no doubt that it is the actual specimen used, Sloane's own abbreviations, "mut" and "depict" indicating that the shell had been lent for drawing.

- 192.
- Melongena melongena*
- (Linné).

Species XIV, page 251.

Buccinum ampullaceum fasciatum, muricatum, labro patentiore. List Hist. Conch., Tab. 904. No. 24 . . . *Murex Jamaicensis multiformiter spinosus.* Pet. Mem. Cur., anno 1708, p. 189.

This is about three Inches long, about two broad and as high. 'Tis of a whitish colour, and hath many large brown Belts or *Fasciae* upon the first Circumvolution, which marks the greatest Part of the Shell, and is set with Rows of very large sharp Prickles . . .

I found them plentifully on the Shores of *Jamaica*.

In the latter part of his long description Sloane mentions that he obtained specimens of all sizes and colourings, with and without spines. The shell recovered from this series is a large, white specimen, mentioned as such in the catalogue.

- 200-204/226, 227.
- Murex (Chicoreus) ramosus*
- Linné.

Species XV, page 251-252.

Purpura sive Murex Pelagius marmoreus. Fab. Col. p. lx. *Buccinum rostratum triplici ordine Muricum canaliculatum horridum.* List Hist. Conch., Tab. 946,

No. 41. *Murex Americanus valde rugosus*. Pet. Mem. Cur., anno 1708, p. 190, No. 8.

This is about four Inches long, very near three broad and high . . . The whole shell is white within and smooth. The mouth is sinuated, over which hollows are Prickles or *Murices*, with many of which there seems to have been no communication with the Fish in the Shell. The whole shell is of a reddish brown colour, and striated spirally. They are sometimes milk white, which may come from the loss of their outward skin, by polishing or accidents.

They are found of several Magnitudes on the Shores of *Jamaica* and I have had them from *Nieves*.

Several species of *Murex* were included under the catalogue numbers quoted above, thought by Sloane to be only variations of the same species from different localities. This error in identification was quite pardonable, for the species grouped together under the several numbers are even now difficult to separate, owing to their inconstancy of colour and formation of the spines.

Murex calcitraba Lamarck and *M. sinensis* Reeve are both included in the series of specimens recovered, ranging, as stated by Sloane, from milk-white to a reddish-brown.

CHAPTER X. Of Bivalv'd Shells

Sloane No.

1419. *Chama macerophylla* Gmelin.

fig. 47.

Species III, page 255.

Spondylus minor subrubra, tenuis, imbricatus, apice distorto, cavitate interiore auriculam referens. Tab. 241, fig. 4, 5, 6, 7.

The greater Valve of this Shell was about an Inch diameter, had an *Apex* very much distorted . . . The outward side of the shell was cover'd with extant Scales and hollow *Apices* of a reddish white colour. The smaller Valve was almost flat, and in the inside, resembled a human Ear . . .

I found it on the Shores of *Jamaica*.

Only a single upper valve of this species has been recovered, but it bears a remarkably clear number, written on the shell in ink that has scarcely faded since it was applied nearly two-hundred-and-fifty years ago.

1344. *Arca (Scapharca) trapezia* Deshayes.

Species VIII, page 257.

Pectunculus major, polyginglymus, hirsutus. Tab. 241, fig. 14, 15, 16. List Hist. Conch., Tab. 236, No. 70. *An idem* Tab. mut. 232, No. 66, depict.

This is a very large Cockle, about three Inches longways, and near as much in Breadth, the two valves are about two Inches in depth . . . The shell is join'd at the Hinge for about two Inches in Length by numerous small Teeth and Cavities. It is on the outside all cover'd over with a brown Membrane thick set with short Bristles or strong Hairs.

I found it in the Sea adjoining *Jamaica* where it is used for Food.

At the end of the *Introduction* to the second volume of the *Natural History of Jamaica*, the author included some miscellaneous plates, following on consecutively from a similar series at the end of the *Introduction* to the first volume. Plate XI of volume two was devoted to illustrations of certain gastropod shells sent to him

from the Straits of Magellan, quite neatly engraved, but in all cases reversed, a fault that also occurs in the two plates of shells described in Book III of this second volume. It is curious that Sloane should have allowed this to happen, particularly in view of his long acquaintance with Lister's *Historia Conchyliorum*, a work in which such a mistake never occurs, the only sinistral shells figured being those that are naturally reversed, as in certain species of *Busycon* and *Amphidromus*.

A companion shell to figure 3 on introductory plate XI has been recovered, considerably larger than the figure, but having the same black periostracum, characteristic of the species, and the same white patches due to incrustation by a Polyzoan. Sloane does not mention the donor of these Magellan shells, but they were probably sent by Mr. Handisyd, whose name appears more than once in the relative catalogue entries.

Sloane No.

2931. *Voluta (Cymbiola) ancilla* (Solander).

Volume II, page viii, plate XI, figure 3.

Buccinum angustum laeve utrinque productius, dentatum ore patulo, foris nigricans, intus lutescens. E. Freto Magellanico.

The descriptions of the shells on Plate XI were engraved under the figures, and only mentioned collectively in the text.

SECTION IV

Several Localized Series of Shells collected between 1690 and 1726

This section includes series of shells, collated and published for the first time, collected by Dr. Engelbert Kaempfer 1690-92, William Dampier 1708-11, Mark Catesby 1722-26, and by several less-known, but enthusiastic donors to the collection from 1698 to 1726.

Kaempfer's shells were all catalogued by Sloane as from Japan, but some were obviously collected en route. Kaempfer gave a general account of the shells of Japan on pages 139-141 of his *History* of that country, published in 1727, in which he recorded the Japanese names and the use made of them for food and cultural purposes.

The precise localities of Dampier's shells were not recorded in the Sloane catalogues, but from Woodes Roger's account, the *Duke* and *Duchess*, the two vessels taking part in the voyage, called at many places where these specimens could have been obtained. A few of the numerous shells collected by Mark Catesby during his visit to the Bahamas and Carolina from 1722-1726 have been recovered and listed here for the first time. Catesby dealt only briefly with the shells in his *Natural History of Carolina*, confining himself to a short account of shore collecting and the description of only four species, two terrestrial and two marine, identified

from Lister's *Historia*, a work to which he felt he could add little that was new, and it was probably for this reason that he figured none of these shells in his own work. The first volume of this appeared in 1731, and the second in 1743, both profusely illustrated with fine colour plates of birds, mammals, fishes and plants.

No doubt Catesby's book had its full share of the errors prevailing at the time, but it seems unjust that a modern author (Peattie, 1937) should regard it as "medieval, credulous and slipshod" when comparing it with the much later work of the American ornithologist, Alexander Wilson, for Catesby's first volume was published at least thirty-five years before Wilson's birth, and at least sixty years before that melancholy but gifted artist arrived in America.

The less-known donors of shells during the period dealt with in this section, were mostly surgeons or sea captains associated with the East India Company, who contributed in no small degree to these early records from little-known quarters of the Globe.

In the following lists the same catalogue numbers will be seen to be attached to specimens collected by different people at different periods of time, a direct result of Sloane's method of multiple entries, but it is usually possible to judge the approximate date of the acquisition of a particular specimen by its position in the series entered under the one number, such apparently ingenuous remarks as "the same as the last only larger. P." being of great service when endeavouring to arrange specimens of the same species in date order.

For the sake of brevity sub-genera and sections have been omitted from the following lists.

SECTION IV (a).—*Specimens from North European Waters*

Sloane No.

1845. *Neptunea despectus* (Linné).

Three fine specimens of this species are in the collection, referred in the catalogue to Lister's plate 1057, dedicated to Dr. Witzen, and giving the locality "Maris Caspis," and it is safe to assume that the specimens may have been received by Sloane from Dr. Witzen via Lister.

1005. *Buccinum undatum* Linné.

Coasts of England and Ireland.

2447. *Ocenebra erinacea* (Linné).

Coast of England.

"Taken from the gizzard of a grey Sea plover. L."

The letter "L" following the entry probably indicates that the specimen was given to Sloane by Dr. Lister.

752. *Trochus (Gibbula) magus* (Linné).

Coast of England & Nova Zembla.

Ex Mari Adriatico & littoribus Ins. Corsicae. Whirl snail from Ireland.

(Sloane catalogue entry.)

THE SLOANE SHELL COLLECTION

SECTION IV (b).—*Specimens from the Mediterranean*

Sloane No.

748. *P. Natica hebraea* (Martyn).

Mediterranean.

749. *Natica josephinae* Risso.

Sicily. Sent by Phillippo Buonanni.

1089. *Astraea rugosa* (Linné).

Gibraltar and Tangier.

Sloane No.

1016. *Patella ferruginea* Gmelin.

Mediterranean.

2121. *Patella ferruginea* Gmelin.

Gibraltar and Palma. Mr. D. Frost.

2387. *Cerithium vulgatum* Bruguière.

Mediterranean.

2905. *Bursa gigantea* (Lamarck).

Mediterranean.

The following four specimens were sent by Mr. John Salvador
Apothecary at Barcelona :

Sloane No.

164. *Panopea glycimeris* (Born).1486. *Natica turtoni* Smith.

Sloane No.

195. *Murex brandaris* Linné.1844. *Murex trunculus* Linné.SECTION IV (c).—*Specimens from the South Atlantic*

Sloane No.

641. *Haliotis midae* Linné.

Cape of Good Hope. Dr. Stewart.

1025. *Haliotis rosacea* Reeve.Africa. Mr. Skeen.
Guinea. Dr. Shaphorst.

Sloane No.

1438. *Dorcasia globulus* (Müller).

Cape of Good Hope. Dr. Hermann.

216. *Conus prometheus* Linné.

Cape Lopez. Sir Thomas Bond.

Shells sent from the Straits of Magellan by Mr. Handisyd.

Sloane No.

2927. *Fissurella picta* (Gmelin).

Sloane No.

1385. *Arca grandis* Broderip & Sowerby.2920. *Mytilus choris* Molina.

This specimen of *Mytilus* which has been polished and the edge
sharpened, was stated by Sloane to be used by the natives of Magellan
as a razor.

SECTION IV (d).—*Specimens from the Caribbean*

Shells sent to James Petiver by Mrs. Newport
from Barbados.

Sloane No.

1561. *Melongena morio* (Linné).1841. *Cymatium clavator* (Lamarck).1454. *Voluta musica* Linné.

Sloane No.

1561. *Fasciolaria aurantiaca* Lamarck.1841. *Cymatium cynocephalus*
(Lamarck).1654. *Ostrea frons* Linné.

Sloane No.

1344. *Arca trapezia* Deshayes.
Jamaica. Mr. Carter.
2816. *Strombus tricornis* Lamarck.
West Indies.

Sloane No.

1348. *Arca rufescens* Reeve.
West Indies.
(Described by Petiver in the
Pterographia Americana, 1712.)

Specimens collected by Mark Catesby in Carolina and
the Bahama Islands 1722 to 1726.

Sloane No.

1443. *Astraea imbricata* (Gmelin).
748. *Natica canrena* (Linné).
2815. *Murex pomum* Linné.
1482. *Fasciolaria tulipa* (Linné).

Sloane No.

1443. *Astraea longispina* (Linné).
1487. *Cymatium pileare* (Lamarck).
1182. *Trochus pica* (Linné).
1894. *Busycon canaliculata* (Gmelin).

With the exception of the *Busycon* the above were all
from the Bahamas.

SECTION IV (e).—Specimens from the Indian Ocean

Shells collected at Fort St. George (Madras) by Mr. Fawcett
of the East India Company Circa 1705.

Sloane No.

209. *Turbo marmoratus* Linné.
1296. *Natica lineata* (Linné).
1113. *Turritella terebra* (Linné).
1252. *Solarium laevigata* Lamarck.
1114. *Turritella duplicata* (Linné).
3342. *Conus millipunctata* Linné.
1467. *Conus figulinus* Linné.

Sloane No.

1119. *Rostellaria curvirostris* Lamarck.
197. *Cymatium femorale* (Linné).
1841. *Cymatium canaliferus* (Lamarck).
1579. *Murex trunculus* Linné.
1119. *Terebra muscaria* Lamarck.
1561. *Melongena morio* Linné.
3849. *Xancus pyrum* (Linné).

1467. *Conus eburneus* Brugère.

Madras shells sent by Rev. Dr. George Lewis
and Mr. Eden circa 1705.

Sloane No.

2827. *Murex adustus* Linné.
1499. *Strombus aurisdianae* Lamarck.

Sloane No.

2832. *Nucella coronata* (Lamarck).
3830. *Conus Stercomuscarum* Linné.

Shells sent by Dr. Waldo from Surat.

Sloane No.

1281. *Voluta vespertilio* Linné.
2846. *Bursa rana* Linné.
186. *Pterocera rugosa* Sowerby.

Sloane No.

1294. *Murex microphyllus* Lamarck.
3696. *Natica lineata* Lamarck.
1333. *Tridacna crocea* Lamarck.

THE SLOANE SHELL COLLECTION

Miscellaneous Indian Ocean Specimens.

Sloane No.

1407. *Monodonta labio* (Linné).
Bombay.
1808. *Terebralia palustris* (Linné).
Mauritius.
1415. *Tridacna imbricata* Röding.
Malacca. Capt. Hill.

Sloane No.

1927. *Turbo petholata* Linné.
Pegu (L. Burma.)
1585. *Turbo petholata* Linné.
Java. Sir Thomas Bond.
1669. *Glycimeris pectunculus* Linné.
Bengal.

Specimens Collected by William Dampier during his
Second Circumnavigation 1708 to 1711.

Sloane No.

1031. *Ellobium aurismidae* (Linné).
1516. *Natica vitellus* Lamarck.

Sloane No.

1358. *Conus miles* Linné.
1609. *Conus magus* Linné.

291. *Tridacna imbricata* Röding.

SECTION IV (f).—Specimens from the Indo-Pacific

Shells brought by Captain Goslin from China.

Sloane No.

1797. *Cymbium tessellata* (Lamarck).
587. *Turbo intercostalis* Menke.
1521. *Cassis recurvirostrum* Wood.

Sloane No.

3924. *Cassis strigata* Gmelin.
1486. *Natica Chinensis* Lamarck.
53. *Distortrix cancellina* (Linné).

From an Unknown Donor in Siam.

Sloane No.

1132. *Vertagus Asperum* (Linné).
2275. *Pterocera rugosa* Sowerby.
1246. *Astraea latispina* Phillipi.

Sloane No.

1743. *Sinum concavus* Lamarck.
1244. *Delphinula laciniata* Lamarck.
1183. *Trochus maculatus* Linné.

Miscellaneous Indo-Pacific specimens.

Sloane No.

1457. *Conus striatus* Linné.
Borneo.
1456. *Voluta vespertilio* Linné.
Luzon. Mus. Pet. Cat. 247.

Sloane No.

2845. *Bursa rana* Linné.
Borneo.
1463. *Conus Pennaceus* Born.
Philippines. Father Camelli.

Sloane No.

1611. *Terebellum subulatum* Lamarck.
1612. Ditto Ditto variety.

"The speckled augur shell."

Specimens Collected by Dr. Engelbert Kaempfer
during his Voyage to Japan from 1690 to 1692.

Japanese Species.

<i>Sloane No.</i>		<i>Sloane No.</i>	
1244.	<i>Angaria atratus</i> (Reeve).	385.	<i>Murex haustellum</i> Lamarck.
1516.	<i>Natica vitellus</i> Lamarck.	983.	<i>Murex tenuispina</i> Lamarck.
1518.	<i>Polynices mamilla</i> (Linné).	150.	<i>Cassis glauca</i> Linné.
749.	<i>Natica Didyma</i> (Röding).	1116.	<i>Terebra maculata</i> Lamarck.
1113.	<i>Turritella terebra</i> (Linné).	2235.	<i>Conus capitaneus</i> Linné.
1487.	<i>Cymatium pileare</i> (Lamarck).	3845.	<i>Cymbium aethiopicum</i> (Linné).
4029.	<i>Solenotellina violacea</i> (Lamarck).		

Indo-Pacific Species Collected en route.

<i>Sloane No.</i>		<i>Sloane No.</i>	
1813.	<i>Vertagus martinianus</i> Pfeiffer.	1113.	<i>Turritella duplicata</i> (Linné).
1801.	<i>Strombus epidromis</i> (Linné).	983.	<i>Murex trapa</i> Röding.
1807.	<i>Lathyrus infundibulum</i> (Lamarck).	3847.	<i>Xancus rapa</i> (Lamarck).
	2786.		<i>Conus arenatus</i> Bruguière.

Shells sent by Dr. James Cunningham from China
between the Years 1698 and 1705 (-8).

<i>Sloane No.</i>	<i>Pulo Condore.</i>	<i>Sloane No.</i>	<i>Chusan.</i>
1113.	<i>Turritella terebra</i> (Linné).	200.	<i>Murex calcitrata</i> Lamarck.
985.	<i>Murex haustellum</i> Lamarck.	200.	<i>Murex sinensis</i> Reeve.
983.	<i>Murex trapa</i> Röding.	5191.	<i>Turbo cornutus</i> Linné.
234.	<i>Turbo sparverius</i> Linné.	5191.	<i>Turbo radiatus</i> Linné.
234.	<i>Turbo argyrostoma</i> Linné	2303.	<i>Galeodes galeodes</i> (Lamarck).

Several of these species are duplicated in the collection, for Cunningham sent parcels to Sloane and Petiver, perhaps by different routes, in order to make sure that at least one arrived safely in England. His last letter, addressed jointly to them both, was received in 1708, but the sender failed to return to this country, and is presumed to have been killed or drowned at sea without trace.

SECTION V

This section is devoted to Sloane specimens figured and described by various authors from 1778 to 1849, and includes five original type-specimens. It is unfortunate that some of the Sloane numbers are missing, but the specimens are quite authentic and agree with the figures and descriptions cited.

Sloane No.

886—887. *Unio (Cristaria) plicatus* (Leach).

Holotype.

B.M.1952.5.10.1.

[China.]

W. E. Leach, *Zoological Miscellancy*, vol. 1, p. 120, Tab. 53. 1814.

Original description :

Dipsas Plicatus.

fig. 50.

Habitat—? Mus. Brit.

Folded *Dipsas*.

"Shell greenish-luteous, internally pearly and iridescent, unequally winged; the lower wing longitudinally, and the umbo transversely folded.

The specimen from which the annexed figure was taken has fourteen pearls adhering to it, and is preserved in the British Museum; it formed part of the collection of Sir Hans Sloane; and is enumerated in the catalogue as a "Bohemian river horse-mussel, with pearls sticking to the shell."

In the museum there are several fragments of the same species, with groups of pearls attached to them."

On the previous page of the *Zoological Miscellany* (p. 119) Dr. Leach proposed the name *Dipsas* as a new genus, for the reception of his new species, a name subsequently found by authors to have been used by J. N. Laurenti in 1768 for a genus of reptiles.

When describing his new species Leach did not quote a Sloane catalogue number, and its absence leads to the conclusion that he may have taken his alleged catalogue entry from elsewhere. Two items having pearls attached were entered by Sloane under consecutive numbers, viz., No. 886, "A pearl muscle with 4 pearls in it," and No. 887, "A pearl muscle with 8 pearls in it." The two valves originally had fourteen "culture" pearls attached to them, six in the right valve and eight in the left, of which two are now missing from each valve, prominent scars showing their former position. The right valve, now believed to be Sloane No. 887, was figured by J. and A. van Rymdyk in the *Museum Britannicum* (Tab. II, fig. 6) as far back as 1778, showing a cluster of six pearls, the two scars in the excellent engraving indicating that two pearls had been removed, or become otherwise detached, during the fifty or more years after being catalogued by Sloane. Dr. Leach quotes the precise words used by the authors of the *Museum Britannicum* in their description of the specimen figured (p. 5), and it is possible that he took this as valid, thus avoiding a tedious search of the Sloane catalogues for a more appropriate entry; the locality "Bohemia" is particularly unsuitable for this Asiatic species.

Sloane himself gave no locality for either of these two entries, but this need cause little concern, for it is now well known that he frequently received specimens from China, where *C. plicatus* has been used over a long period for the production of "culture" pearls for commercial and religious purposes (Jackson, p. 104 *et seq.*).

Measurements of holotype : Length, 170 mm.; height, including wing, 120 mm.; thickness, 55 mm.

Recorded localities : China (Fischer, 1887). Japan (Hirase, 1934).

The fragments of *C. plicatus* with groups of pearls attached to them, mentioned by Leach in his last paragraph, are still in existence.

Sloane No. ? *Voluta (Cymbiola) subnodosa* Leach. Holotype.
Straits of Magellan. B.M. 1952.5.10.2.

W. E. Leach, *Zoological Miscellany*, vol. i, p. 24, Tab. VIII, 1814.
Original description :

Voluta subnodosa

In Mus. Britannico, et Dom. Bullock.

SLIGHTLY-KNOTTED VOLUTE.

Shell luteous, inclining to fulvous, slightly striated, irregularly streaked with rust colour ; spire much produced, and simple ; body volution towards the apex, with a few slightly elevated knots.

The habitat of this very beautiful shell is not known. There is a specimen in the collection of Mr. Bullock, which he most kindly lent me for examination, and another in the British Museum.

In the absence of a Sloane number, this shell can only be surmised to have come to him from the Straits of Magellan, but the fact that it is the actual specimen described by Leach is substantiated by the statement that he knew of only two specimens, and it is only natural that he should choose the museum example for illustration and description. The specimen agrees quite well with Nodder's figure and may safely be regarded as the holotype of the *Voluta subnodosa* Leach, even though it should later prove to be from a collection other than Sloane.

Measurements of holotype : Length, 120 mm. ; width, at widest part, 63 mm. ; Aperture, from columellar to outer lip, 30 mm.

Recorded localities : Magellan Straits (Sowerby 1847). Argentine Coast ; Falkland Is. ; Tierra del Fuego. (Maxwell Smith 1942.)

Sloane No. ? *Strombus pugilis* Linné.

W. E. Leach, *Zoological Miscellany*, vol. i, p. 52, Tab. XXII, 1814.

Original description :

Strombus Sloanii

Habitat—? Mus. Brit.

Holotype.
B.M. 1952.5.10.3.

SLOANE'S *STROMBUS*.

Basal whorl smooth ; base with longitudinal undulating grooves ; apex with elevated, compressed, quadrate processes ; superior volutions knotted, longitudinally lineated, the lines elevated.

This shell has been considered as an accidental variety of *Strombus pugilis* ; but the distinctions between them are so strong, that I cannot accede to the opinion, although it is entertained by some eminent conchologists. The processes on the apex of the first volution, are for the most part marked beneath with a deeply-impressed groove, and those situated nearest the base, are slightly hollowed on the inner side of the shell.

This shell, figured by Lister in 1688, has already been mentioned in the first section of this catalogue, from which it will be seen that Linné had already referred this actual shell to his *Strombus pugilis* by quoting Lister's figure. Leach does not seem to have been aware of this, otherwise he would not perhaps have been so obtuse as to describe an acknowledged monstrosity as a new species. Dillwyn (1817) considered that a single immature specimen was insufficient for the creation of a new species, and Hanley (1855), who was aware of the existence of this specimen, condemned the designation as erroneous.

Sloane No. ?

***Murex (Homalocantha) rota* Mawe.**

J. and A. van Rymdyk, *Museum Britannicum*, plate xxvii, fig. 2, p. 70 (2), 1778.

This immature specimen was figured by Lister in 1688 (Tab. 906, fig. 25) without any description, and appears to have been regarded as a rare specimen ninety years later, when it was described in the above work as "one of the most elegant of shells"; the description goes on to say that "the body of the shell is white, of an ash-colour, and the protuberances are of a brownish black, either all over, or at least at the extremity. I copied Nature as I saw it, and I am sorry my shell has none of this black, owing to these shells being frequently bleached." The author need not have been distressed by the absence of colour in his shell, for the brownish black mentioned is a feature of *Murex scorpio* Linné, to which the typically and constantly white *M. rota* is closely allied, but sufficiently characteristic to be separated.

The figure given in the above quoted plate is not at first recognizable as the Sloane shell; the engraver has fallen into the usual trap and forgotten to reverse the drawing, and has made the shading far too heavy for a perfectly white shell. These are serious faults for artists of whom it was said in the preface to the book, "every Nerve has been stretched to shew their Talents and good judgement."

Sloane No.

2931.

***Voluta (Cymbiola) ancilla* Solander.**

W. Wood, *Index Testaceologicus*, Supplement, p. 10, pl. 3, f. 2, 1828 (*Voluta gracilis*).

Although Wood's figure is so small, it is unmistakably the Sloane specimen, by reason of a fault in the shell causing a pale band to appear round the upper part of the body whorl, which has been faithfully indicated in the figure. The specimen, although lacking the Sloane number, bears a small label believed to be in William Courten's hand, and similar to that found attached to the specimen of *Busycon pyrum* recorded in Section I of this catalogue. Wood states the locality to be unknown, but the species had already been correctly recorded from the Straits of Magellan by Sloane in 1725 (see Section III, Sloane No. 2931).

Sloane No.

2566.

Solen sloanii Hanley.

Holotype.

Pegu, Lower Burma.

B.M. 1952.5.13.1.

J. E. Gray in S. Hanley Illustrated Edition of *Lamarck's Shells* (1), p. 21
pl. 1, fig. 59, 1842.

Original description :

Gray in Brit. Mus. *Linear, straight, narrow, fragile, pellucid, rather broader and obtusely rounded anteriorly spotted with tawny brown ; a sharp prominent tooth in one valve, the vestiges of one in the other.* $\frac{1}{2}$. . . 3.

Hanley states that the name adopted for this shell was a manuscript one, found on the tablet in the British Museum, and attributed to J. E. Gray. The above work was abandoned in its intended form after 1842, and rearranged as an *Appendix* to Wood's *Index Testaceologicus*, the plates and figures being re-numbered to form a sequence to the eight supplementary plates of that work. *Solen sloanii* becomes fig. 18 on plate 11 of the *Appendix*, which finally appeared in 1856 with the title of *An Illustrated and Descriptive Catalogue of Bivalve Shells*.

Measurements of Holotype : Length, 70 mm. ; height, 12 mm. ; thickness, 8 mm.

The locality "Pegu" is that recorded for the specimen in the Sloane catalogue entry No. 2566.

Sloane No. ?

Ommastrephes sloanii Gray.

Syntype.

B.M.1952.5.10.5.

J. E. Gray, *Catalogue of the Mollusca in the Collection of the British Museum.*
Part 1 : Cephalopoda antepedia, p. 61 (5), 1849.

This specimen is recorded with some misgiving, for in his original description Gray mentions two specimens, which he lists as a. and b.? respectively:

- a. New Zealand, Waitemata. Small. In spirits. Presented by Dr. Sinclair, M.D.
- b.? Var.? In spirits, adult. Mus. Sloane. Fin nearly half the length of the body. *Cycria Leach*, MS. 1817.
- c. Shell of b. broken, dry; taken out by Dr. Leach.

The soft parts of neither a. nor b. have yet been recognized from the several unlocalized and dissected *Ommastrephids* among the older spirit specimens, and in view of Gray's own doubts on the matter, it is advisable to merely record the existence of this fragmentary syntype.

Sloane No. ?

Sepioteuthis sloanii Gray.

Syntype.

West Indies.

B.M. 1952.5.10.4 a.b.

J. E. Gray, *Catalogue of the Mollusca in the Collection of the British Museum.*
Part 1 : Cephalopoda antepedia, pp. 81-82 (7), 1849.

This specimen (originally described by Dr. Leach as *Loligo Sloanii*, in manuscript 1817) is far more satisfactory than the preceding, for the practically undamaged gladius and complete soft parts are both in existence, and agree with the description published by Gray.

Again two specimens were chosen for description, listed by Gray as follows:

- a. Honduras. In spirits.
- b. The shell of a. c. Loc? In spirits. Mus. Sloane.
- d. Shell of c., dry. Taken out by Dr. Leach.

Sepioteuthis sloanii Gray, as already noted, is now considered by authors to be synonymous with the endemic Carribean species *S. sepioidea* Blainville, the type-species of his genus *Sepioteuthis*, described in 1824.

Measurements of dry gladius: Length, 100 mm.; width at the widest part, 12 mm.

There is little doubt that there are other Sloane specimens still to be found among the older spirit material, but changing of spirit and replacement or loss of original labels makes identification extremely difficult.

3. SUMMARY

During 1950 to 1952 over four hundred specimens, forming part of the Sloane Shell Collection, have been rediscovered in the mollusca collections of the British Museum (Natural History).

Forty shells are the original specimens figured and described by Martin Lister in the *Historia Conchyliorum*, published between 1685 and 1692-(7).

Thirteen shells are the originals figured and described by James Petiver in the *Gazophylacium Naturae* (1702-1709), by whom twenty-six others in the collection were described in the *Memoirs for the Curious* (1707-1709) and the *Philosophical Transactions* 1698 to 1712.

Five specimens were among those brought back by William Dampier from the voyage round the world in 1708-11, and given by him to Sir Hans Sloane.

Twenty-five specimens are those described by Sir Hans Sloane in his *Natural History of Jamaica* (1725), brought back by him from that Island in 1689.

A number of Lister's and Petiver's figured specimens now extant were referred to by Linné (1758 and 1767) Born (1778), Gmelin (1790) and Lamarck (1819-22) in their respective synonymies.

Three specimens are the originals figured by J. and A. van Rymdsdyk in the *Museum Britannicum* (1778).

Five are holotypes described by W. E. Leach (1814-17) and J. E. Gray (1849).

Sloane specimens have also been referred to or figured by E. M. da Costa (1771); J. G. Children (1823-5); W. Wood (1828); and J. E. Gray (1834).

Several of the original drawings made by Susanna and Anna Lister for the *Historia Conchyliorum* have been photographed and reproduced for comparison with the actual specimens and final engravings.

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5. ACKNOWLEDGMENTS

Thanks are due to Dr. H. W. Parker for extra facilities to carry out this work; to the Librarian of the Bodleian Library, Oxford, for permission to reproduce Martin Lister's original drawings; to Dr. A. J. Cain of the Department of Zoology and Comparative Anatomy, University Museum, Oxford, and his assistant Mr. J. Hull for cordial help in the preliminary search for original Lister material in the University Museum collections; to Dr. W. J. Rees for his kindly advice and encouragement, and to Sir Walter Gurner for elucidation of certain passages in the Latin preface to the *Historia Conchyliorum*.

A particular word of thanks is due to Mr. J. V. Brown of the photographic staff of the British Museum (Natural History) for his care in arranging the figured Sloane shells in their original positions.

EXPLANATION OF PLATES

(With the exception of figure 50 all figures are actual size)

PLATE 1

FIG. 1. Inscription on the flyleaf of a copy of *De Cochleis*, forerunner of the *Historia Conchyliorum*, and presented to Dr. Hans Sloane by Martin Lister on his departure for Jamaica in 1687. The inscription is in Lister's holograph.

The inscription reads as follows:

"For his honoured Friend Dr. Hans. Sloane. M.L. He is desired to collect & transmitt
hither ye Land snails & such shells as shall be found in ye Fresh water rivers or ponds of Jamaica
which will verie much oblige his most humble servant—
Martin Lister."

"Also to observe, whether there are any naked snails in Jamaica, I mean such as are naturallie
without shells at hand as with us."

To his honored Friend
 Dr. Hans Sloane

ALL

He is desired to collect & transmit
 hither y^e Land Snails, & such
 shells as shall be found ⁱⁿ Jamaica
 both water & dry or ^{of} ⁱⁿ ^{the} sea
 will very much oblige his most
 humble servant

Martin Lister

Also to observe whether there are any naked
 snails in Jamaica, I mean such as
 are natuxallic without shells at land
 as with us

FIG. 1.

INSCRIPTION IN SLOANE'S COPY OF *De Cochleis* IN MARTIN LISTER'S HOLOGRAPH.

PLATE 3

FIG. 4. Original description of the shell now known as *Acavus haemastoma* (L) sub-species *melanotragus* (Born), in Lister's writing and attributed by him to the museum of Dr. van Mildret.

FIG. 5. Original drawings from the Radcliffe *Historia*.

FIG. 6. Final engravings made from these drawings by Susanna Lister.

FIGS. 7 and 8. Actual specimens from the Sloane collection, probably ex. Courten (S. 1963).

78. *Cochlea majuscula*, intra quintam spiram finita; in
prima a. spira admodum lata fascia p' fuscus rubescens
quam excipit altera angusta; superior a. eysdem
spira par. lata' albescit. ipse oris, limbus reversus
p' fusco nigricat.

[s' M. D. Van = Mildner.]

FIG. 4.

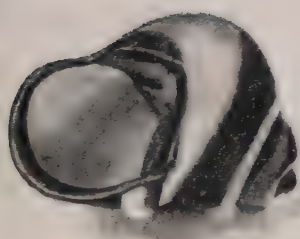


FIG. 5.

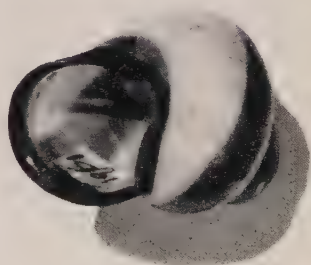
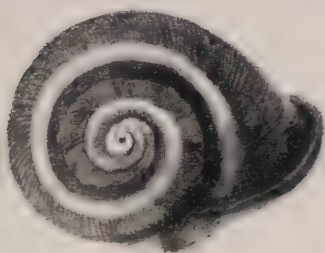
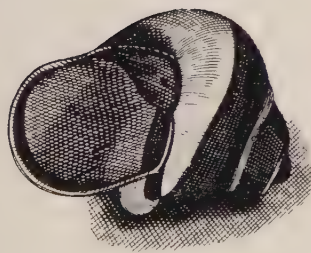


FIG. 7.

43 cochlea latis et nigricantibus
fascijs donata.



43



FIG. 6.

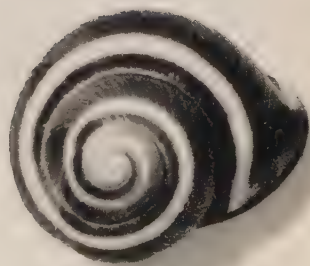


FIG. 8.

PLATE 4

FIG. 9. *Ampullarius cornuarietis* (L), Lister's original description; specimen attributed to the museum of Dr. G. Curtein (Courten). Note the word "exotici" in the heading (footnote to p. 8 refers).

FIG. 10. Original drawing from the Radcliffe *Historia*.

FIG. 11. Actual Sloane specimen (S. 1993).

FIG. 12. Final engraving by Susanna Lister. *Historia* Tab. 136.

Turbinos exotici, Fluvialibus, Compressi.

1. *Cochlea compressa majuscula*, utrinque ad umbilicum, at non aequaliter, cavata; nostris coxis Anglicanis haud ita dissimilis; fasciis quibusdam angustioribus pullisque circumdata.

[d' CH. D. G. Curwen.]

FIG. 9.

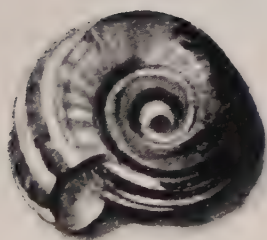


FIG. 10.

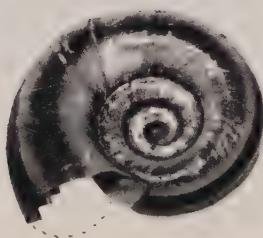


FIG. 11.



FIG. 12.

PLATE 6

FIG. 19. Lister's original heading for his Sec. 16, later altered to Sec. 1 of Liber III (Multivalvium), and original drawing by Anna Lister, both from the Bodleian collection.

FIG. 20. Final engraving, with heading and specific description.

FIG. 21. Sloane specimen 745, *Pholas orientalis* Gmelin (damaged).

fol. 16. Conchium testarum, pholados antiquis dicta.

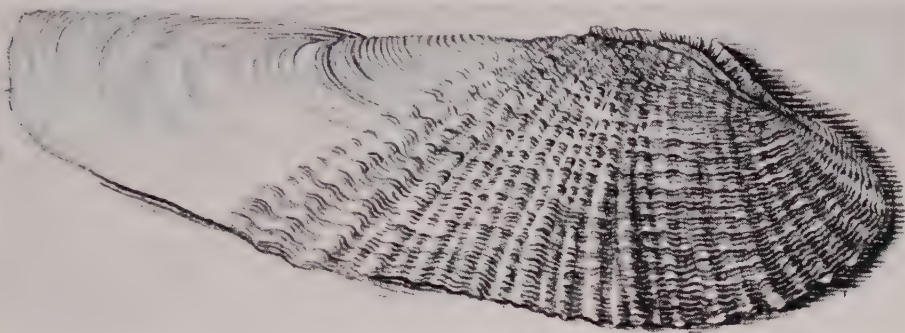
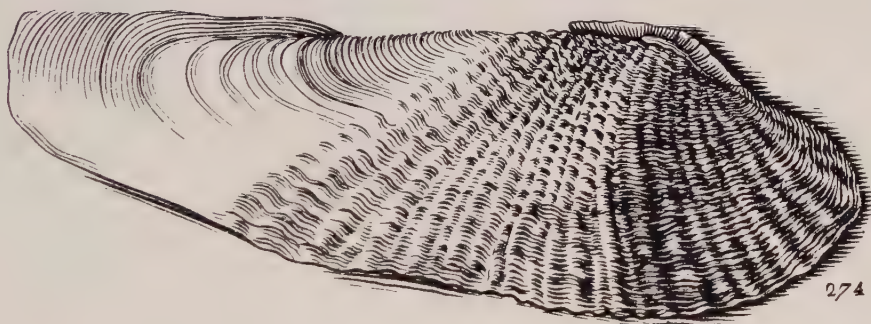


FIG. 19.

Sectio 1. cap. I. de

Pholadibustriumue testarum Conchis,
cardinibus loculis quibusdam quare
perforatis.



274. pholas albus, angustus, ad dimidium fere dorsi laevis.

431

FIG. 20.

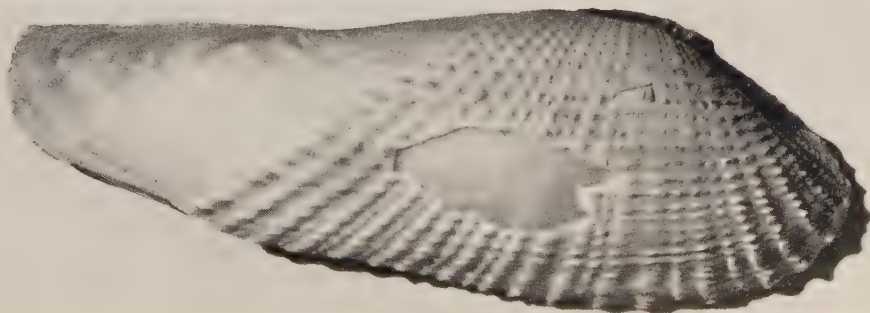


FIG. 21.

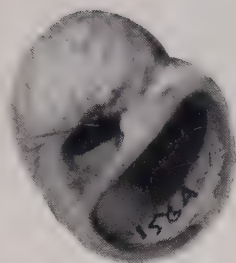
Pholas orientalis. ORIGINAL DRAWING, ENGRAVING AND SPECIMEN.

PLATE 7

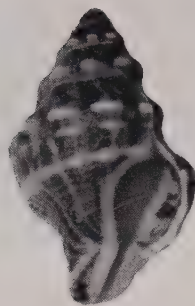
- FIG. 22. S.2243 *Cypraea mauritiana* L.
FIG. 23. S.1584 *Natica fulminea* (Gmelin).
FIG. 24. S.1578 *Lathyrus cingulifera* (Lamk.).
FIG. 25. S.2239 *Conus janus* Hwass.
FIG. 26. S.2276 *Busycon pyrum* (Dillwyn).
FIG. 27. S.2659 *Turritella variegata* (L.).
FIG. 28. S.1797 *Cymbium tessellata* (Lamk.).
FIG. 29. S.1013 *Patella granularis* L.
FIG. 30. S.1105 *Capulus intortus* Lamk.



22



23



24



25



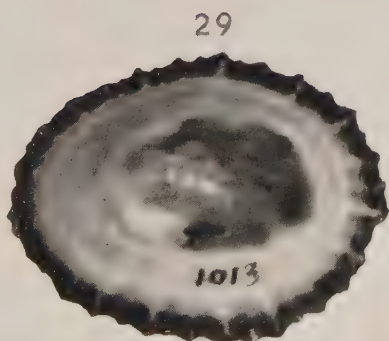
26



27



28



29

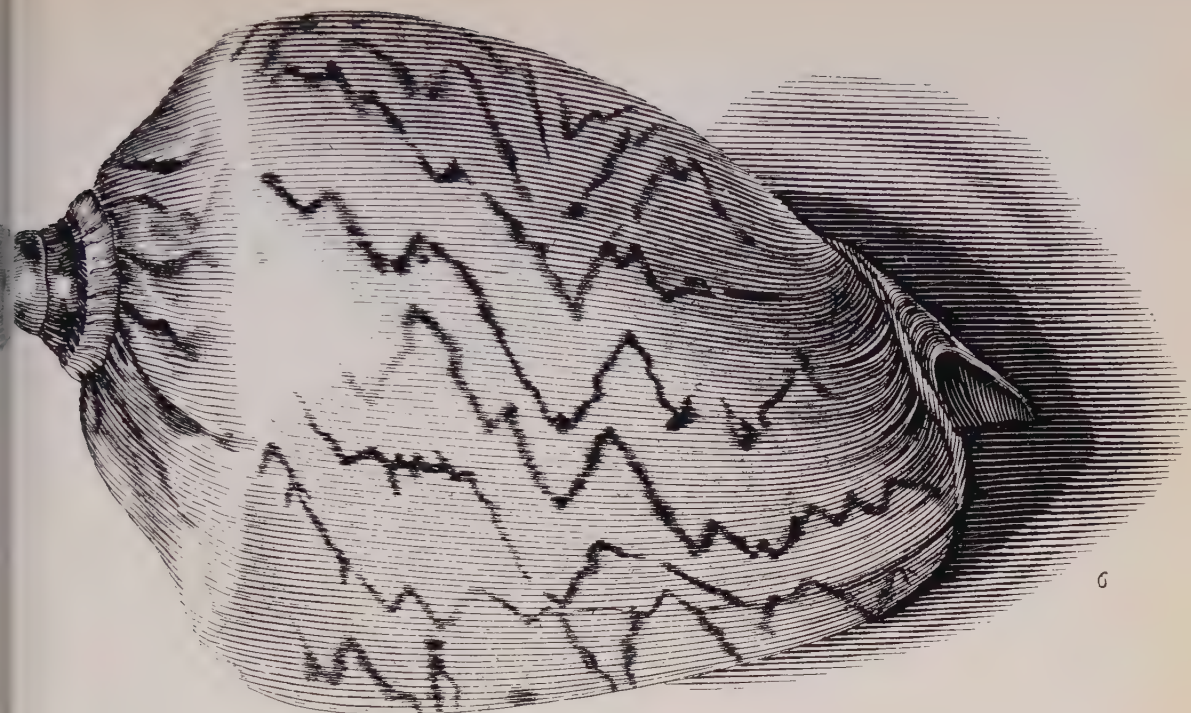


30

PLATE 8

FIG. 31. *Volula scapha* Gmelin engraved by Anna Lister, *Historia*, Tab. 799.

FIG. 32. Original specimen from the Sloane collection. (Catalogue number not traced :



6

Buccinum Persicum Undarum, clavicula paululum exserta.

FIG. 31.

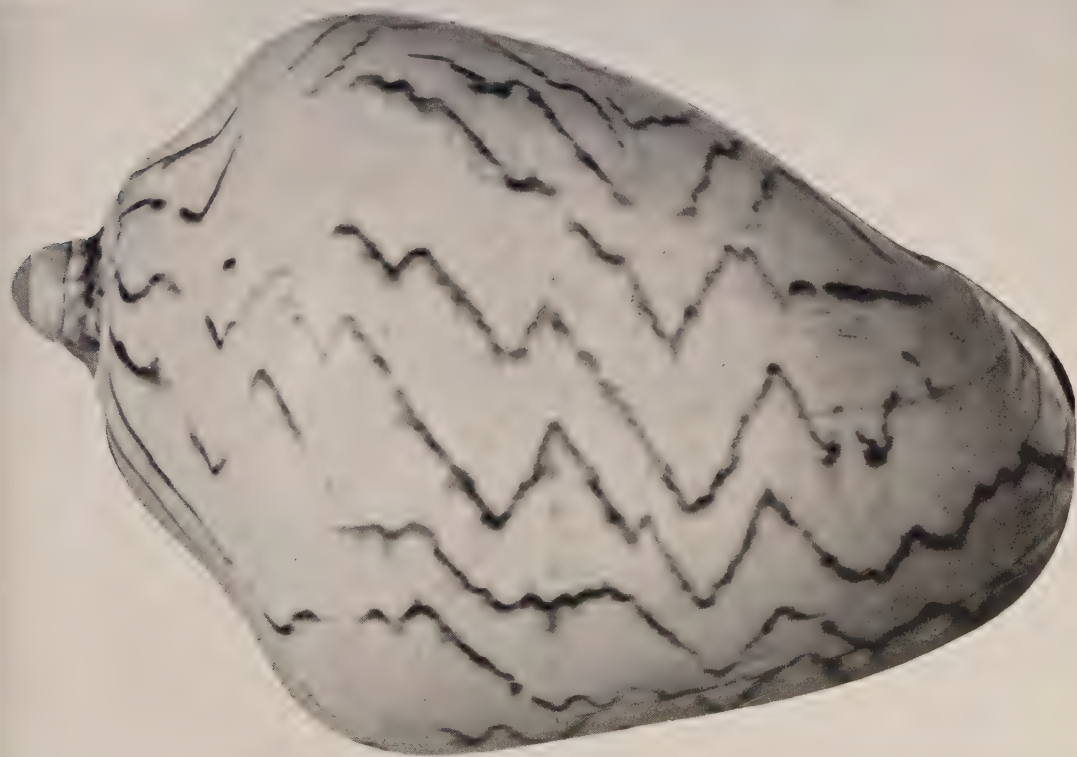


FIG. 32.

Voluta scapha, ANNA LISTER'S ENGRAVING AND SLOANE SPECIMEN.

PLATE 9

- FIG. 33. Sloane specimen 3871 *Rostellaria rectirostris* Lamk.
FIG. 34. Original drawing from Bodleian collection.
FIG. 35. Final engraving by Susanna Lister. *Historia*, Tab. 854, sp. 11.



FIG. 33.



FIG. 34.

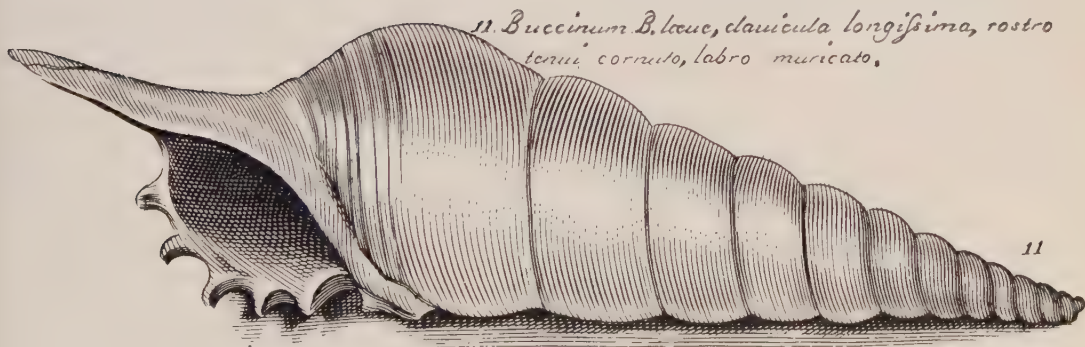


FIG. 35.

PLATE 10

FIG. 36. *Fasciolaria distans* Lamk., engraved by Anna Lister.

FIG. 37. Original drawing in the Bodleian collection.

FIG. 38. Sloane specimen 1481 ex. Courten "Bay of Campeche." (See reproduction of Sloane catalogue entry (Fig. 2).)



FIG. 36.

FIG. 37.

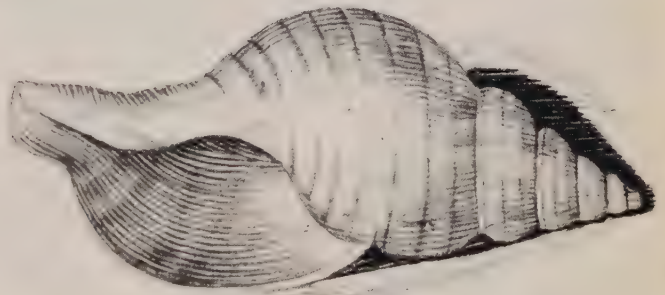


FIG. 38.

PLATE II

Original specimens collected by Sir Hans Sloane in Jamaica.

FIG. 39. S.1983 *Pleurodonte acuta* (Lamk.) var. *patina* C. B. Adams.

FIG. 40. S.1130 *Cerithium articulatus* Ad. & Reeve.

FIG. 41. S.1695 *Pleurodonte aspera* (Férussac).

FIG. 42. S.1531 *Nerita polita* L.

FIG. 43. S.1594 *Strombus gigas* L. (Juvenile).

FIG. 44. S. 752 *Trochus magus* (L.). (Probably introduced.)

FIG. 45. S. . . ? *Chiton granulatus* (Gmelin).

FIG. 46. S.1787 *Conus coronacivica* Röding.

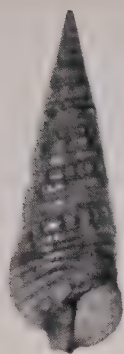
FIG. 47. S.1419 *Chama macerophylla* Gmelin. (Single valve.)

FIG. 48. S. 177 *Trochus pica* (L.).

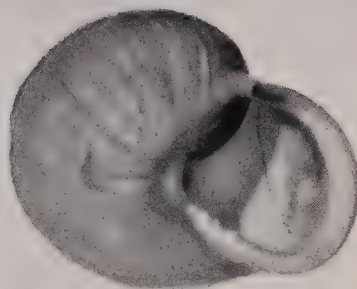
FIG. 49. S.1443 *Astraea calcar* (L.).



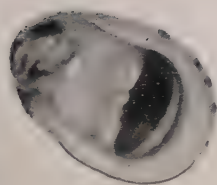
39



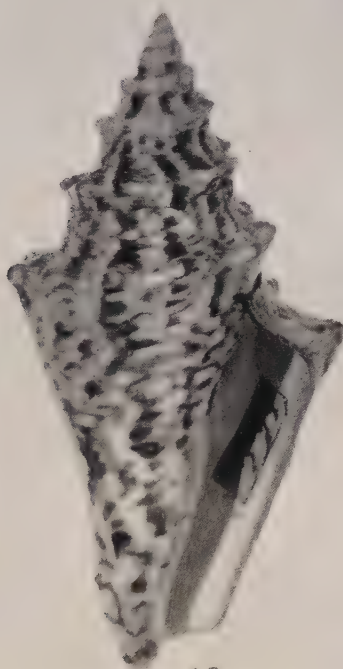
40



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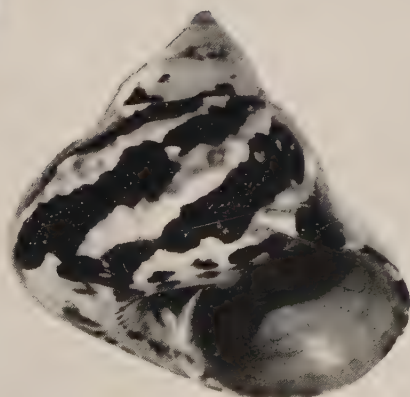
45



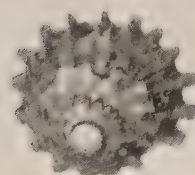
46



47



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49

PLATE 12

FIG. 50. Sloane specimens 886—887. *Cristaria plicatus* (Leach) with culture pearls attached to each valve. *Holotype* (reduced).

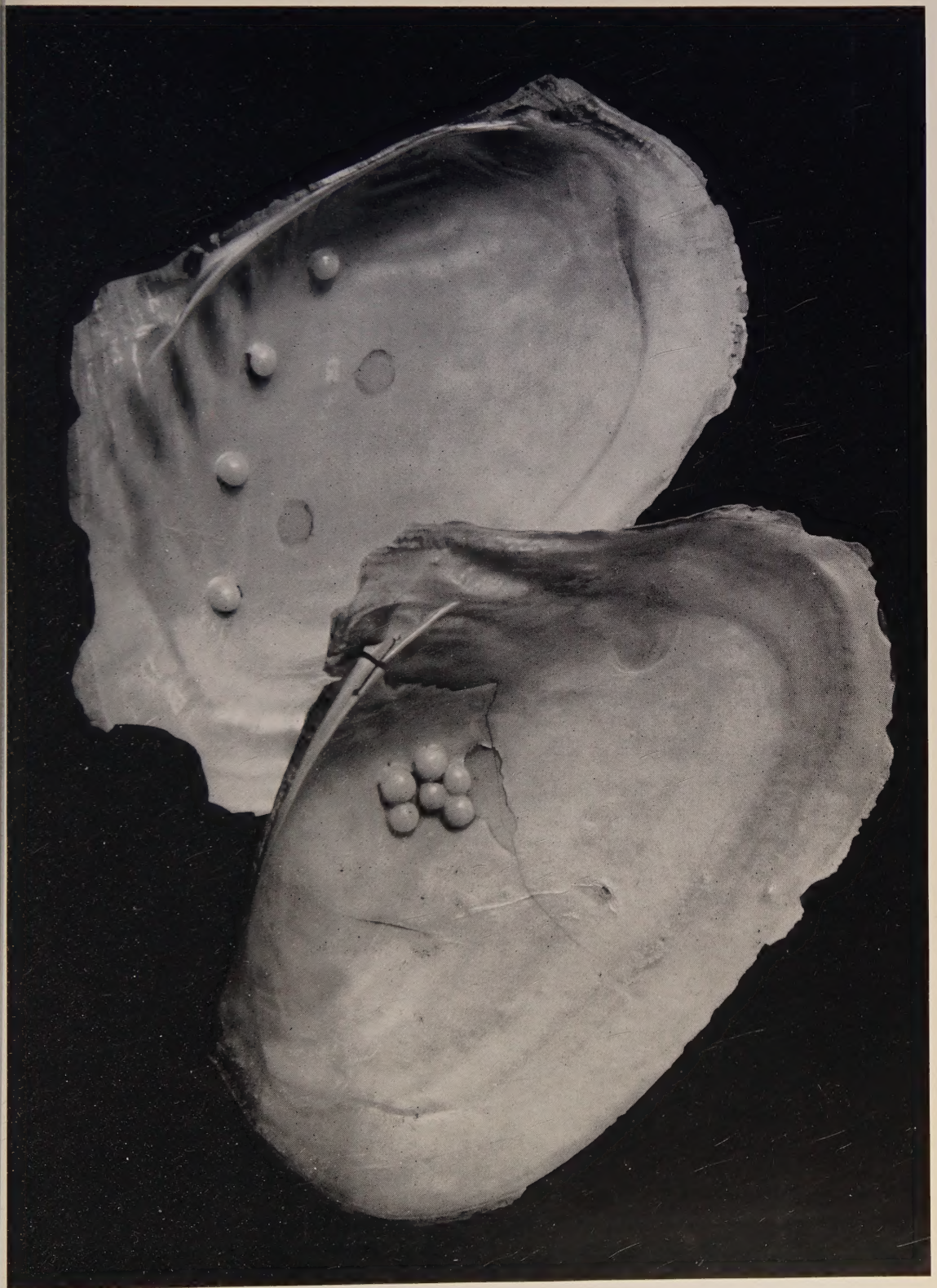
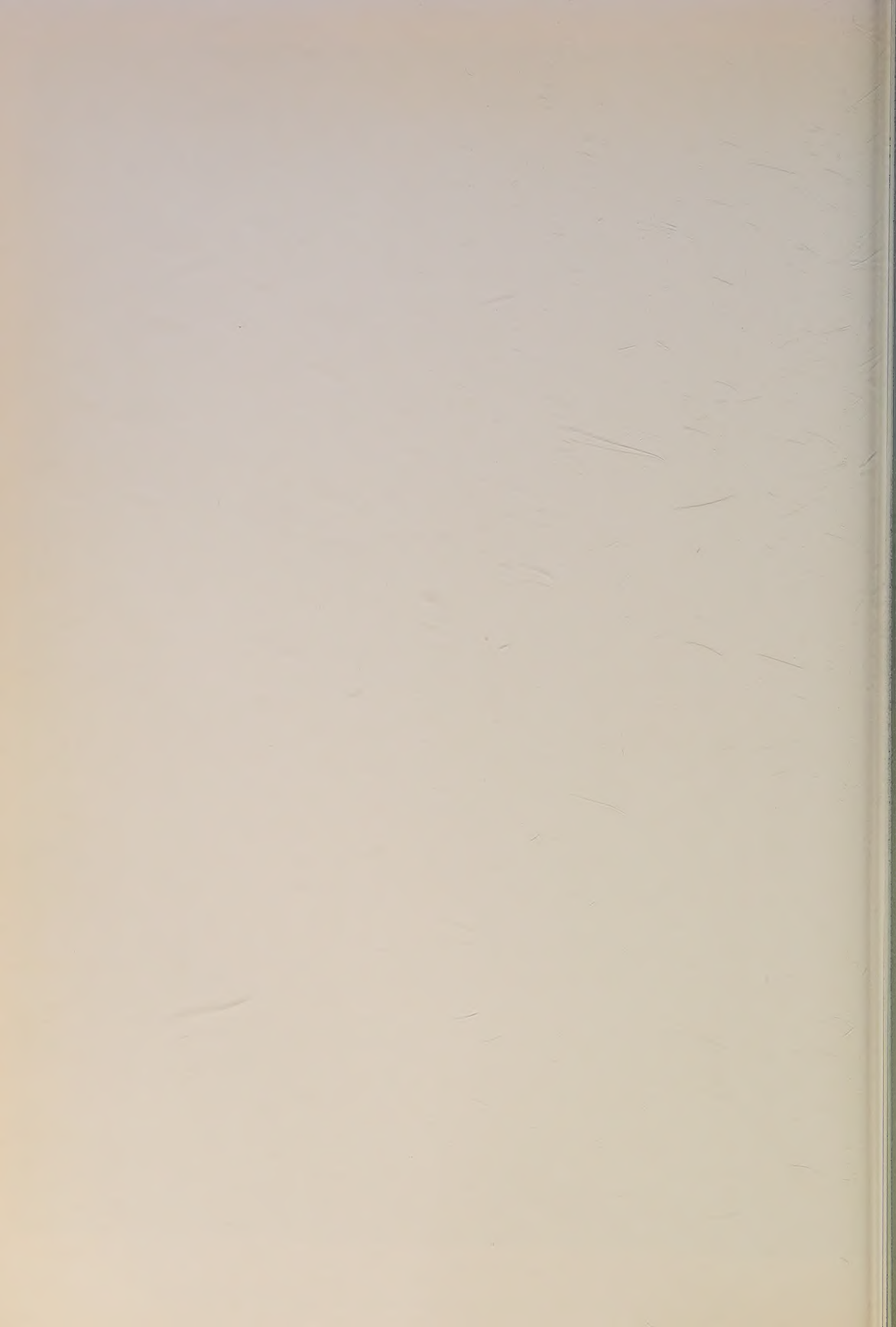


FIG. 50.

Cristaria plicatus (LEACH) Holotype MUS. SLOANE. (SLIGHTLY REDUCED.)



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